Arizona Department of Transportation
Intermodal Transportation Division
Environmental & Enhancement Group
205 South 17th Avenue
Phoenix, Arizona 85007

Draft Environmental Assessment

for

Grand Ave: 59th Ave/Glendale Ave

Maricopa County, Arizona
Project No. RAM-060-B-507
TRACS No. 060 MA 155 H5610 01C

Approved by: _____ On: 9-9-03
RICHARD M. DUARTE, Manager

This document has been prepared in accordance with the Action Plan of the Arizona Department of Transportation for State-Funded Highway Projects.

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AASHTO	American Association of State Highway and Transportation Officials
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADT	Average Daily Traffic
ARHP	Arizona Register of Historic Places
APS	Arizona Public Service
ARS	Arizona Revised Statutes
ASC	Alternative Selection Committee
AZPDES	Arizona Pollutant Discharge Elimination System
BNSF	Burlington Northern Santa Fe Railway
CFR	Code of Federal Regulations
CO	carbon monoxide
dB	decible
dBA	A-weighted sound level in decibels
EA	Environmental Assessment
ED	enumeration district
EEG	Environmental & Enhancement Group
FHWA	Federal Highway Administration
I-10	Interstate 10
I-17	Interstate 17
LOS	level of service
MAG	Maricopa Association of Governments
MIS	Major Investment Study
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAP	Noise Abatement Policy
NRHP	National Register of Historic Places
O_3	ozone
PISA	Preliminary Initial Site Assessment
PM_{10}	particulate matter less than 10 microns
ppm	parts per million
RPTA	Regional Public Transportation Authority
sec/veh	seconds per vehicle
SHPO	State Historic Preservation Officer
SR101L	State Route 101 Loop
SRP	Salt River Project
SWPPP	Storm Water Pollution Prevention Plan
TSM	Transportation System Management
US 60	United States Route 60
vpd	vehicles per day
vph	vehicles per hour

Environmental & Enhancement Group Responsibilities

1. The Arizona Department of Transportation Environmental & Enhancement Group would complete a Phase I Site Assessment at the eight identified parcels prior to right-of-way acquisition. Any additional hazardous materials investigations and, if applicable, remediation would be completed by the Arizona Department of Transportation prior to right-of-way acquisition. (Refer to Page 53.)

Design Responsibilities

1. The Arizona Department of Transportation would coordinate with the Regional Public Transportation Authority during final design to address relocation of any temporarily or permanently impacted bus stops or bus routes. (Refer to Page 27.)

2. The Arizona Department of Transportation would coordinate with the Burlington Northern Santa Fe Railway during the development of the traffic control plan. (Refer to Page 31.)

3. The Arizona Department of Transportation would design, construct, and/or reconstruct new sidewalks or impacted sidewalks, respectively, within the project limits to accommodate alternative transportation travel. (Refer to Page 31.)

4. During final design, the Arizona Department of Transportation would coordinate with, and submit design plans for review to, the City of Glendale floodplain administrator. (Refer to Page 51.)

5. During final design, the Arizona Department of Transportation Project Manager would contact the Arizona Department of Transportation Environmental & Enhancement Group hazardous materials coordinator to ensure that, if necessary, additional hazardous materials investigations would be completed by the Arizona Department of Transportation prior to right-of-way acquisition. (Refer to Page 53.)

Roadside Development Section Responsibilities

1. All affected public right-of-way would be landscaped with drought-tolerant plants and the area covered with an inert ground cover. (Refer to Page 50.)

2. The Roadside Development Section would determine who would prepare the Storm Water Pollution Prevention Plan. (Refer to Page 51.)

Phoenix Construction District Office Responsibilities

1. The Phoenix Construction District Office would provide the public a minimum of 14 calendar days of advance notice of construction activities. (Refer to Page 24.)

2. The Phoenix Construction District Office and Arizona Department of Transportation Community Relations Office would coordinate with the City of Glendale to ensure media coverage of construction activities using citywide media. (Refer to Page 24.)

3. The Phoenix Construction District Office would ensure that the Project Office schedules pre-construction meetings with the downtown Glendale business community to inform it of the construction sequencing and road closures. (Refer to Page 25.)

4. The Phoenix Construction District Office would coordinate with the City of Glendale Police and Fire Chiefs prior to and during construction to coordinate anticipated closure dates and durations as part of the creation and operation of a Transportation System Management Program. (Refer to Page 26.)

5. The Phoenix Construction District Office and the contractor would notify the public prior to any temporary access impacts to pedestrians or motorists through use of proper construction signing and news media advisories issued by the Arizona Department of Transportation Community Relations Office. (Refer to Page 31.)

6. The Phoenix Construction District Office would submit the Arizona Pollutant Discharge Elimination System Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality. (Refer to Page 53.)

Contractor's Responsibilities

1. The contractor would place directional signs on alternate routes to downtown Glendale. (Refer to Page 24.)

2. Full one-way and two-way traffic closures of 59th Avenue and Glendale Avenue would be scheduled to occur between February 15 and November 15 to minimize disruption to downtown Glendale. (Refer to Page 25.)

3. Any sidewalks that would be temporarily closed during construction would be identified with signs and alternative routes would be provided. (Refer to Page 31.)

4. With the exception of Grand Avenue, no full one-way or two-way traffic closures would be permitted between November 15 and February 15. (Refer to Page 31.)

5. The contractor would adhere to Maricopa County Rules 310 and 360 regarding fugitive dust emissions and new source performance standards, respectively, during construction. (Refer to Page 43.)

6. The contractor would coordinate with Arizona Department of Transportation Environmental & Enhancement Group Air Quality Personnel (602.712.7767) during the planning of nighttime road closures or detours during winter months for air quality purposes. (Refer to Page 43.)

7. All earth-moving and hauling equipment would be washed at the contractor's storage facility prior to arriving on-site to prevent the introduction of invasive species seed. (Refer to Page 50.)

8. All disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity. (Refer to Page 50.)

9. The contractor would submit the Arizona Pollutant Discharge Elimination System Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality. (Refer to Page 53.)

10. The contractor would be responsible for obtaining any necessary asbestos permits for demolition of any structures done by the contractor. (Refer to Page 53.)

Standard Specifications Included as Mitigation Measures

1. According to ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction***, Section 107 Legal Relations and Responsibility to Public (2000 Edition), if previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor would stop work immediately at that location and would take all reasonable steps to secure the preservation of those resources. The Engineer would contact the Arizona Department of Transportation Environmental & Enhancement Group, Historic Preservation Team, at 602.712.8636, immediately and make arrangements for the proper treatment of those resources. (Refer to Page 41.)

2. Fugitive dust generated from construction activities would be controlled in accordance with the ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction***, Section 104.08 (2000 Edition), Stored Specification 104DUST (11/01/95), special provisions, and local rules or ordinances. (Refer to Page 43.)

3. Construction noise would be controlled in accordance with the ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction***, Section 104.08 (2000 Edition), special provisions, and local rules or ordinances. (Refer to Page 49.)

4. Construction materials would comply with ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction***, Section 104.09 (2000 Edition). Excess concrete, curing agents, formwork, loose embankment materials, and fuel would not be disposed of within the project boundaries. (Refer to Page 53.)

5. According to ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction***, Section 107.07 (2000 Edition) if previously unidentified or suspected hazardous materials are encountered during construction, work would cease at that location and the Arizona Department of Transportation Engineer would be contacted to arrange for proper assessment, treatment, or disposal of those materials. The contractor shall not resume work in such locations until approved by the Engineer. (Refer to Page 53.)

6. Prior to use, any material sources required for this project outside of the project area would be examined by the contractor for environmental effects through a separate environmental analysis in accordance with ***Arizona Department of Transportation's Standard Specifications***

for Road and Bridge Construction, Section 1001 Material Sources (2000 Edition) (Stored Specification 1001.2 General). (Refer to Page 54.)

7. Excess waste material and construction debris would be disposed of at sites supplied by the contractor in accordance with ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*** Section 107.11, Protection and Restoration of Property and Landscape (2000 Edition). Disposal would be made at either municipal landfills approved under Title D of the Resource Conservation and Recovery Act, construction debris landfills approved under Article 3 of the Arizona Revised Statutes 49-241 (Aquifer Protection Permit) administered by the Arizona Department of Environmental Quality, or inert landfills. (Refer to Page 54.)

I. INTRODUCTION

A. Explanation of Environmental Assessment

This Environmental Assessment (EA) is being prepared to evaluate the social, economic, and environmental impacts of the proposed action, while providing an opportunity for the public and for local, state, and county governments to provide input and/or comment through scoping and public meetings. This EA provides the Arizona Department of Transportation (ADOT) a detailed analysis to examine and consider the levels of impact on sensitive social and environmental resources and, by doing so, assists in the decision-making process.

B. Location

The proposed project is located at the Grand Avenue, 59th Avenue, and Glendale Avenue intersection within the city of Glendale, Maricopa County, Arizona (refer to Figures 1, 2, and 3). Within the Phoenix Metropolitan Area, this portion of United States Route 60 (US 60) is designated as Grand Avenue. Typically, arterial streets within the Phoenix Metropolitan Area intersect from north-south and east-west directions, which results in standard, four-legged intersections. Grand Avenue, however, orients in a northwest-to-southeast direction. This alignment of Grand Avenue creates six-legged intersections as it intersects main north-to-south and east-to-west arterial streets (refer to Figure 3).

C. Background and Overview

Grand Avenue was originally built to link agricultural lands and their growing communities to downtown Phoenix and the state capitol. With the increased growth in surrounding communities, congestion on Grand Avenue has correspondingly worsened. Because of increasing congestion, Grand Avenue has undergone a series of studies by federal, state, and local agencies over the past two decades to identify and examine improvement alternatives, ranging from eliminating Grand Avenue to developing it as an expressway.

In 1985, the Maricopa Association of Governments (MAG) completed the ***West Area Transportation Analysis***. This report analyzed the option to build a freeway along the corridor and/or build a grade-separation structure, which would reconfigure one of the roads at each six-legged intersection. In 1990, the Interstate 10 (I-10) to Interstate 17 (I-17) connection was completed. This connection reduced some of the through-travel on Grand Avenue, but did not resolve all of the traffic operation problems on Grand Avenue.

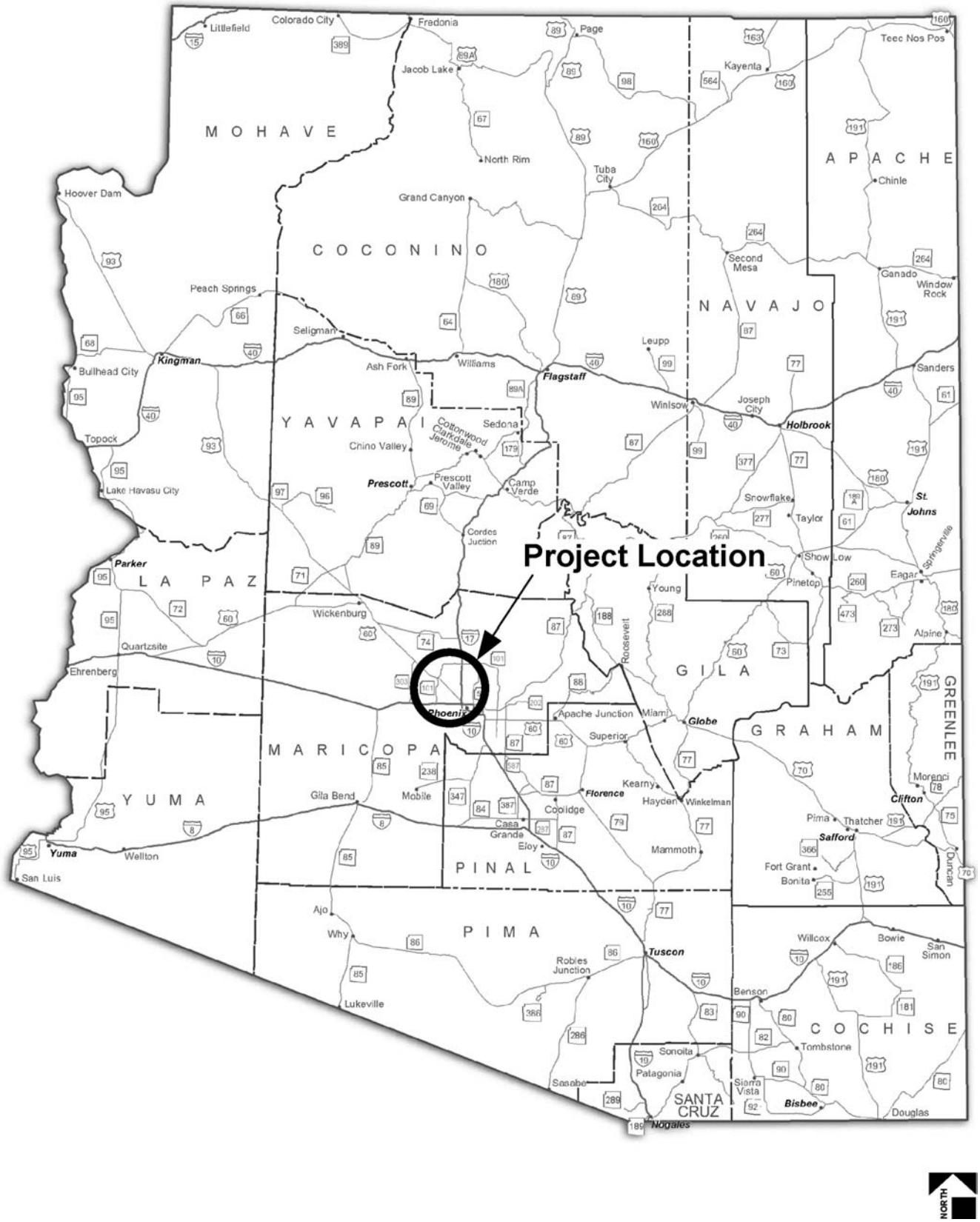
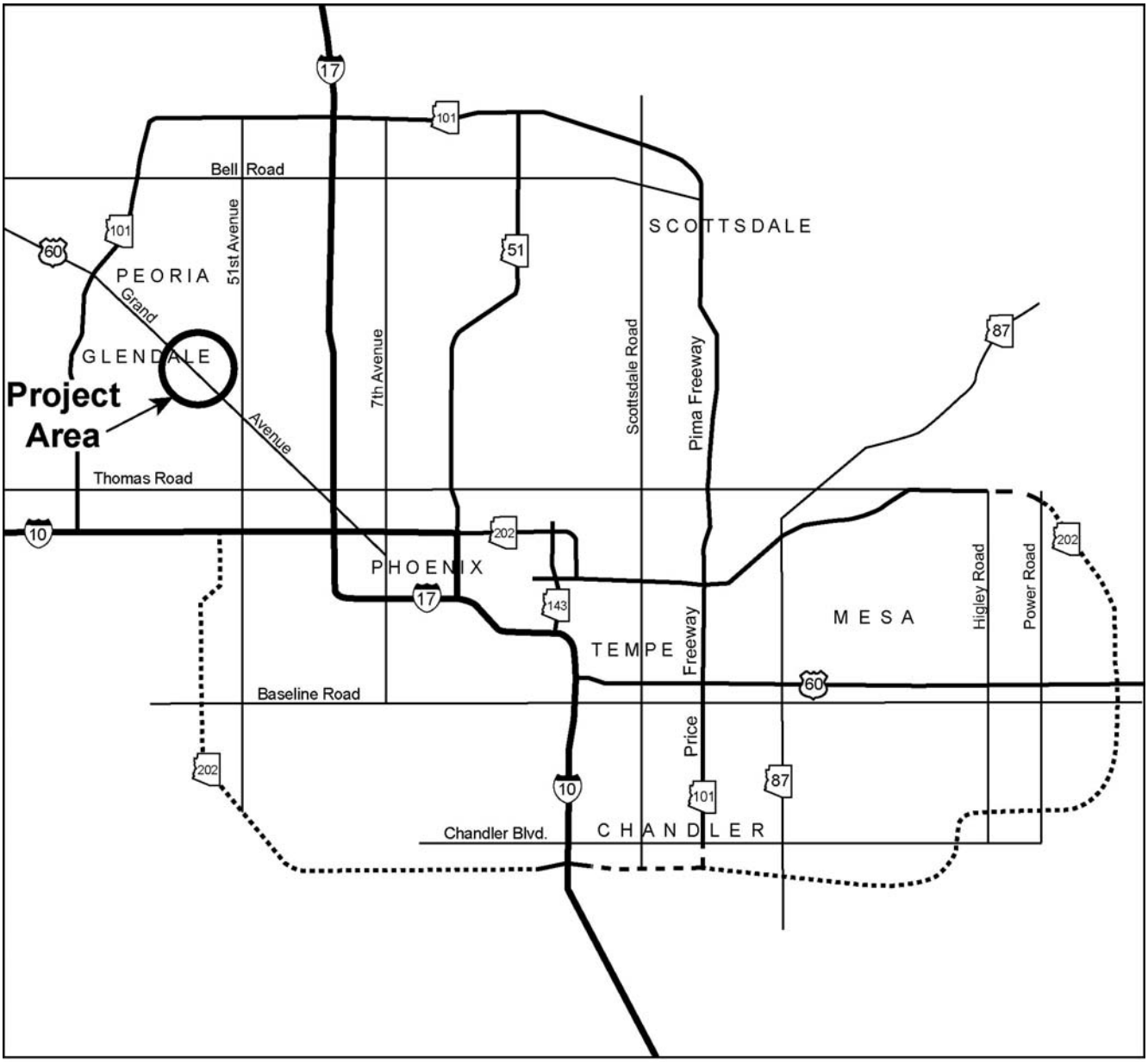


Figure 1. State Location Map



Key

Built/Existing Freeways

Freeways Under Construction

Planned Freeways

Miles

0 5 10

NORTH

Figure 2. Project Vicinity

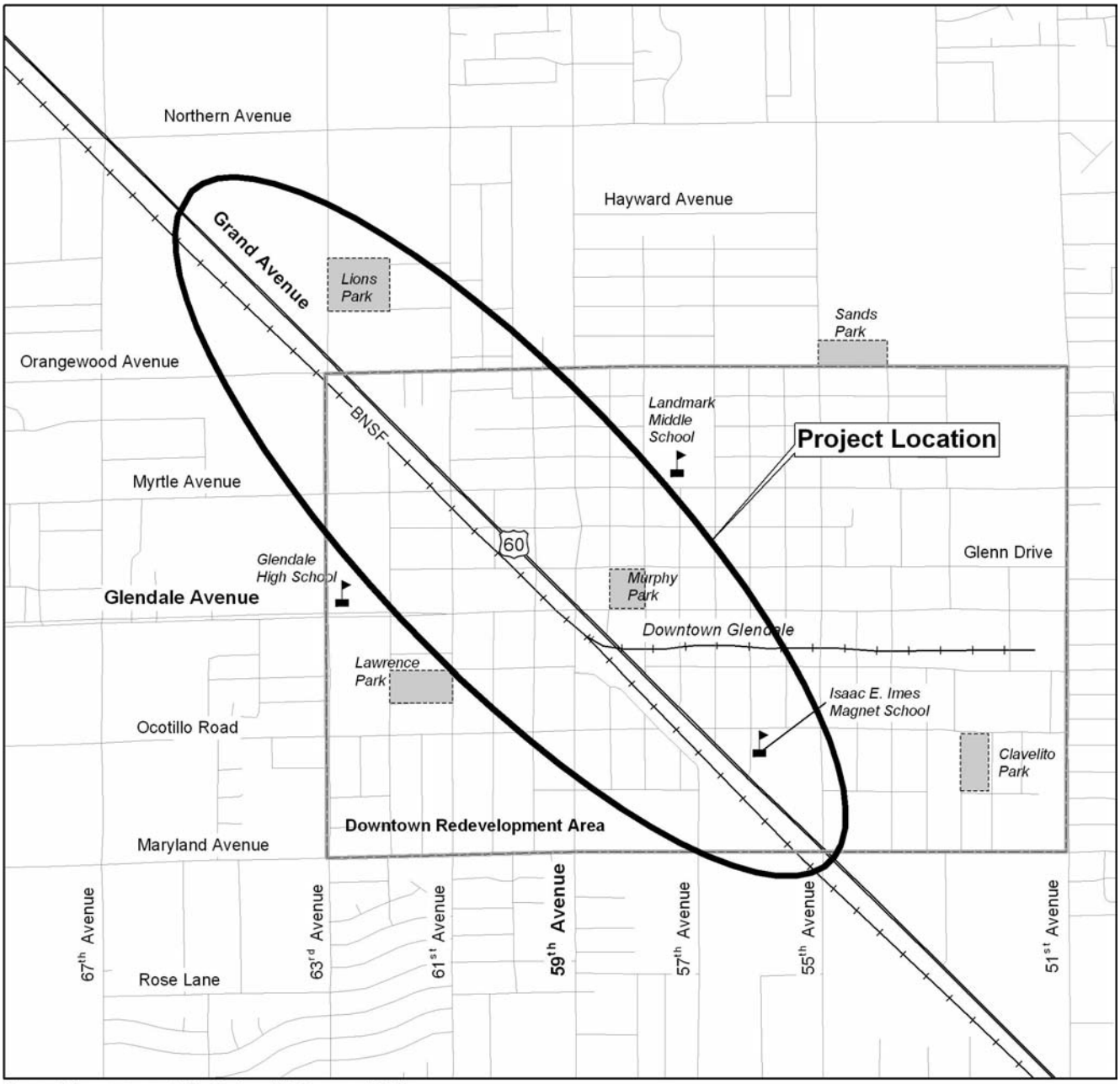


Figure 3. Project Location

In 1996 ADOT and MAG completed the ***Grand Avenue Corridor Study***, which developed expressway concepts based on design speeds and traffic service. For budgetary reasons, the Grand Avenue Expressway concept was eliminated from further planning by the governor of Arizona and MAG's Regional Council.

In January 1999, ADOT initiated the ***Grand Avenue Major Investment Study*** (MIS). This study evaluated and recommended transportation improvements for the entire Grand Avenue corridor and identified potential environmental impacts. During the MIS, a steering committee comprised of ADOT; the Cities of Glendale, Peoria, and Phoenix; MAG; Maricopa County; the Regional Public Transportation Authority (RPTA); WESTMARC (a private association for businesses and development in the West Valley); and the Burlington Northern Santa Fe Railway (BNSF) was formed to identify improvement options to the Grand Avenue corridor. In addition, two public meetings and a stakeholders' meeting were held to provide information about the MIS and gather input from the public and stakeholders. Eight project objectives were identified for evaluation:

1) eliminate six-legged intersections
2) eliminate railroad crossings
3) improve regional mobility
4) promote development opportunities
5) improve the aesthetics of the corridor
6) serve the statewide function of US 60
7) promote multimodal uses in the corridor
8) accommodate the projected travel demand in the corridor

The MIS focused on improvements at eight locations along Grand Avenue. Two options from the 1996 ***Grand Avenue Corridor Study,*** which also had a public involvement process, were refined and evaluated in the MIS. These two options, resulting from the MIS, were identified as Option 4 - Alternating Grade Separations and Option 5 - Limited Expressway. Each option addressed the eight project objectives, but Option 4, the preferred option, would more effectively address railroad crossings and be less expensive than Option 5.

The overall project objectives for the corridor, as stated in ADOT's MIS, were refined for this intersection project. ADOT's project-specific objectives are to improve the traffic operation (i.e., reduce intersection delay times and eliminate the six-legged intersection) while minimizing environmental impacts and right-of-way acquisition, reduce construction costs, and limit traffic restrictions during construction. The proposed improvements should comply with current ADOT and

American Association of State Highway and Transportation Officials (AASHTO) design criteria and guidelines. The proposed improvements would accommodate future traffic volumes projected for the design year 2025. In addition, one of the project objectives is to reduce intersection delay times, providing a level of service (LOS) of D or better. LOS is a qualitative measure referring to the degree of congestion or delay experienced by motorists. LOS ranges from A to F, with A being the best quality of traffic flow and F being the poorest (refer to Table 1 and Figure 4).

Table 1. Level of Service Categories for Signalized Intersections

Level of Service	Average Delay per Vehicle (seconds/vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

Source: Transportation Research Board, Highway Capacity Manual 2000.

Level of Service A. Free flow at posted speed limit, frequent passing opportunities.

Level of Service D. Sluggish flow, no passing opportunities.

Level of Service B. Relatively free flow, limited passing opportunities.

Level of Service E. Very sluggish flow, reduced travel speeds, no opportunity for passing.

Level of Service C. Relatively free flow, but almost no passing opportunities.

Level of Service F. Heavy congestion, frequent stop and go conditions, no passing opportunities.

Figure 4. Level of Service Categories

II. PROJECT PURPOSE AND NEED

A. Purpose and Need

Grand Avenue and the adjacent BNSF provide a transportation corridor serving industrial and commercial businesses in the western Phoenix Metropolitan Area. Grand Avenue also provides through-traffic mobility and local access to commercial and retail businesses. The six-legged intersection formed by Grand Avenue, 59th Avenue, and Glendale Avenue causes average traffic delays of approximately 184 seconds (in the morning) to 248 seconds (in the evening) during peak travel periods. As displayed in Table 1, delays exceeding 80.0 seconds fall into LOS F- the category used to measure the poorest level of service. Therefore, the existing delays at this intersection reflect a very poor LOS. Trains on the BNSF tracks that parallel Grand Avenue can create additional delays of up to 240 seconds for those motorists traveling along 59th Avenue and Glendale Avenue. In the 2025 design year, traffic volumes are expected to rise, resulting in increased traffic delays and congestion at this intersection, as well as at other six-legged intersections throughout the Grand Avenue corridor.

As described above, the average delays at the Grand Avenue, 59th Avenue, and Glendale Avenue intersection are about three times as long as the LOS F threshold of 80.0 seconds per vehicle (Table 2). Without traffic movement improvements, and considering projected traffic increases, the intersection would continue to operate with extremely long traffic delays in the 2025 design year. Table 2 illustrates 2000 and projected 2025 traffic volumes and the vehicular delay time if no improvements (No Build Alternative) to the intersection are made. Traffic volumes are represented by the Average Daily Traffic (ADT) in number of vehicles per day (vpd).

Table 2. Existing 2000 and Projected 2025 No Build Alternative Traffic Volumes and Peak Hour Delays

	2000			2025 (No Build Alternative)		
		Delay (in seconds)[2]			Delay (in seconds)	
Location	ADT (vpd)[1]	Morning	Evening	ADT (vpd)	Morning	Evening
Grand Avenue	25,000-26,200	54-231	56-206	33,500-33,700	54-268	57-244
59th Avenue	22,500-23,800	70-232	126-364	36,500-36,900	202-364	220-444
Glendale Avenue	17,300-18,800	68-312	305-428	19,800-21,000	91-393	357-573

Source: ADOT 2001

[1] ADT (vpd) - Average Daily Traffic (vehicles per day) during weekdays

[2] Delay ranges represent total approach delays in each travel direction (e.g., northbound-southbound).

Removing Grand Avenue from the existing six-legged intersection by reconstructing it as a grade-separation underpass would

1) improve the LOS for the remaining intersection legs to LOS D during the morning commute when the average delay would drop from 252 seconds per vehicle to 39 seconds per vehicle, and just above the threshold for LOS F during the afternoon commute when the average delay would drop from 318 seconds per vehicle to 82 seconds per vehicle;
2) improve intersection traffic capacity, which would reduce congestion; and
3) improve regional traffic flow throughout the Grand Avenue corridor.

B. Conformance with Regulations, Land Use Plans, and Other Plans

The proposed project complies with the City of Glendale's ***General Plan*** (1996) and ***Transportation Plan*** (2001) and MAG's 2001 update to the ***MAG Long Range Transportation Plan***.

C. General Project Schedule

Final design is planned for completion by the end of 2003, with the acquisition of right-of-way being completed in spring 2004. Once project-area right-of-way is acquired, construction would begin, with late winter 2004/2005 being the current estimate. The proposed intersection improvements would be open to traffic by the end of 2006.

D. Environmental Resources Eliminated from Detailed Study

The following resources were eliminated from further evaluation because it was determined that either these resources did not occur within the project area or did not apply to this specific geographic location. The proposed improvements would not impact the following: geological setting and mineral resources; farmland; groundwater; sole source aquifers; waters of the United States under Section 404 of the Clean Water Act; wild and scenic rivers; biological resources including federally listed threatened, endangered, proposed, or candidate species; Arizona Species of Concern; Arizona Native Plant Law species; designated critical habitat for any threatened and endangered species; wetlands; riparian habitat; or National Natural Landmarks.

III. ALTERNATIVES

A. Alternatives Considered and Eliminated from Further Consideration

The alternatives were developed and evaluated during ADOT's Design Concept Study based on the design criteria established for the project including right-of-way, traffic/operation issues, and total vehicular delay (refer to Table 3). The Design Concept Study included efforts to minimize ground disturbance and right-of-way acquisition, reduce construction costs where feasible, and minimize impacts to motorists and pedestrians during construction. The Design Concept Study was used to assist ADOT in the selection of an alternative to carry forward into the next phase of design and to this EA. All of the build alternatives would consider using a grade-separation, meaning that either the improved roadway would be elevated over or would be under the remaining two arterials at this six-legged intersection. This document does not revisit all alternatives considered throughout the study. For more information on build alternatives that were considered but eliminated from detailed study, please refer to the ***Draft Alternative Section Report Grand Avenue (US 60) At 59th Avenue/Glendale Avenue*** (ADOT 2001) and the ***Grand Avenue Major Investment Study*** (ADOT 1999). These documents are available for review at ADOT's Environmental & Enhancement Group (EEG).

1. No Build Alternative

The No Build Alternative would allow for minor improvements and routine maintenance. This alternative proposes no major improvements for the Grand Avenue, 59th Avenue, and Glendale Avenue intersection. The intersection would remain as a six-legged intersection and the No Build Alternative would not decrease delay times, improve traffic movement through the intersection in the design year, or eliminate the BNSF at-grade track crossing when compared with current build recommendations. The No Build Alternative does not meet the operational needs of the project in the year 2025, but is the baseline condition used for comparison against the build alternatives to assess the magnitude of the impacts.

2. Build Alternatives

The MIS recommended that Grand Avenue be reconstructed as an underpass under 59th and Glendale Avenues. Two additional build alternatives, both comprised of a grade-separation 59th Avenue, were evaluated as a result of public input obtained at the November 2, 2000, public meeting.

Table 3. Comparison of Alternatives

Consideration	59th Avenue Underpass Alternative	59th Avenue Overpass Alternative	Grand Avenue Underpass Alternative
Right-of-way Required (acres)	9.4	11.1	3.3
Parcels Taken[1] (total takes)	Commercial-16 Residential-6	Commercial-22 Residential-6	Commercial-8 Residential-0
Costs (millions)	$25,770,000	$22,767,000	$29,770,700
Total Vehicular Peak Hour Delay (2025)[2]; LOS	a.m.- 104 sec/veh; (LOS F) p.m.- 119 sec/veh; (LOS F)	a.m.- 104 sec/veh; (LOS F) p.m.- 119 sec/veh; (LOS F)	a.m.- 39 sec/veh; (LOS D) p.m.- 82 sec/veh; (LOS F)
Economic Impacts[3]	• May result in 3 business closures/relocations • Estimated maximum short-term annual revenue loss from business closures/ relocations of $951,000 • Total estimated short-term revenue loss from customer avoidance of project area: $1.3 million • Estimated short term City of Glendale sales tax loss of over $18,000	• May result in 5 business closures/relocations • Estimated maximum short-term annual revenue loss from business closures/ relocations of $588,000 • Total estimated short-term revenue loss from customer avoidance of project area: $1.4 million • Estimated short term City of Glendale sales tax loss of over $19,000	• May result in 18-22 business closures/relocations • Estimated maximum short-term annual revenue loss from business closures/relocations of $2.3-2.8 million • Total estimated short-term revenue loss from customer avoidance of project area: $3.7-4.1 million • Estimated short term City of Glendale sales tax loss of over $49,000
Operational Issues/ Considerations	• Increases traffic on Myrtle Avenue by 498 vph (a.m.) and 425 vph (p.m.). • Three local streets are disconnected from Grand Avenue. • No change of travel across Grand Avenue. • Total estimated construction time is estimated to be 47 weeks.	• Increases traffic on Myrtle Avenue by 498 vph (a.m.) and 425 vph (p.m.). • Three local streets are disconnected from Grand Avenue. • No change of travel across Grand Avenue. • Total estimated construction time is estimated to be 45 weeks.	• Increases traffic on Myrtle Avenue by 558 vph (a.m.) and 655 vph (p.m.). • Eight local streets are disconnected from Grand Avenue. • Travel across Grand Avenue on 61st Avenue would not be provided. • Total estimated construction time is estimated to be 58 weeks.

Source: ADOT 2001

[1] This row represents the land use of parcels anticipated to be acquired for new right-of-way. Although no residential parcels would require acquisition, one residential structure located on a commercial property would be required for this alternative; this structure is currently vacant and condemned. This row also does not indicate the number of vacant parcels that would be acquired under each Alternative, as this information was not available for all Build Alternatives.

[2] sec/veh - seconds per vehicle.

[3] Short-term is defined as the period beginning at the announcement of the project and ending 3 years after the completion of construction. Numbers of business closures/cessations does not reflect numbers of commercial properties acquired for right-of-way.

The three build alternatives developed to improve the intersection of Grand Avenue, 59th Avenue, and Glendale Avenue consisted of 1) 59th Avenue as an underpass, 2) 59th Avenue as an overpass, and 3) Grand Avenue as an underpass. All three alternatives would eliminate the six-legged intersection by grade-separation of one leg from the intersection. These alternatives were evaluated based on input from the public and the Alternative Selection Committee (ASC) and based on assessments of the overall feasibility and operability of the design concepts. The ASC representatives included ADOT

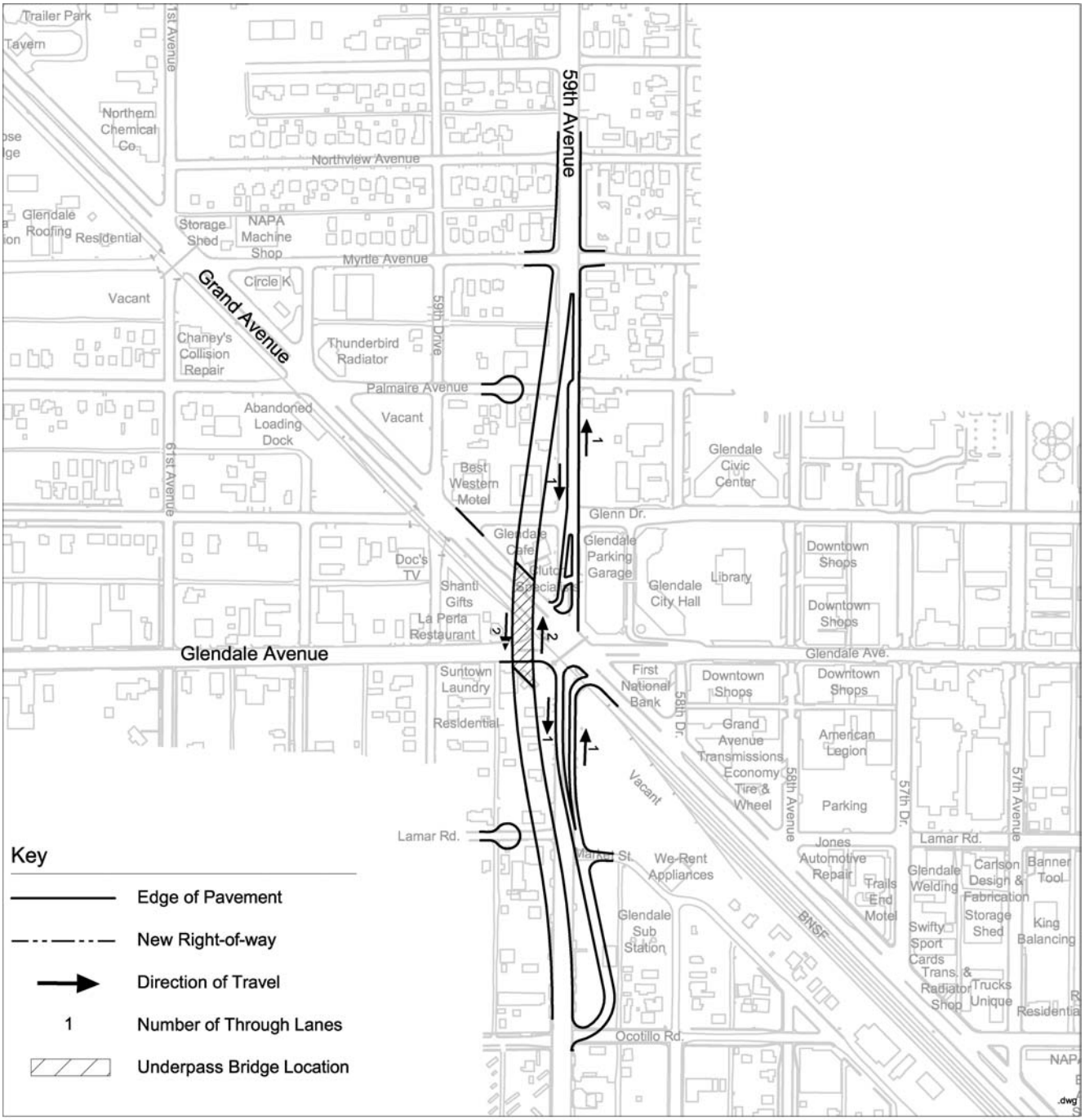
Valley Project Management, ADOT Phoenix Construction District, ADOT Right-of-Way Section, ADOT Roadway Section, ADOT EEG, and the City of Glendale.

a. 59th Avenue Underpass Alternative

The 59th Avenue Underpass Alternative would provide a grade-separation underpass reconstructing 59th Avenue under both Grand and Glendale Avenues slightly to the west of the existing alignment (Figure 5). The underpass would be constructed as a four-lane roadway (two lanes in each direction) extending from Ocotillo Road to just north of Myrtle Avenue. No pedestrian access would be provided along the grade-separation portion of 59th Avenue.

New connector roads would be constructed within the existing 59th Avenue alignment to provide local traffic circulation and access to remaining residences and businesses. Four local streets would be disconnected from 59th Avenue (Glenn Drive, Palmaire Avenue, Lamar Road, and a segment of Ocotillo Road). A new traffic light would be required at the 59th Avenue and Ocotillo Road intersection, and the existing traffic signal at the 59th Avenue and Myrtle Avenue intersection would remain. Drainage improvements would include over 1 mile of drainage pipes to convey water to an existing drainage basin located at the intersection of 67th and Northern Avenues. Approximately 9.4 acres of right-of-way would be required for construction of these improvements directly impacting 16 commercial properties and 6 residential properties. The remaining Grand Avenue and Glendale Avenue intersection would still operate at LOS F during both the morning (104 seconds per vehicle) and afternoon (119 seconds per vehicle) peak travel periods. The 59th Avenue Underpass Alternative was projected to result in three business cessations. The estimated construction cost would be approximately $26 million.

The 59th Avenue Underpass Alternative was eliminated from further consideration because 1) total vehicular delay would remain a LOS F, compared to the Grand Avenue Underpass Alternative (which would reduce vehicular delay to a LOS D/LOS F) (refer to Table 3), and 2) the 59th Avenue Underpass Alternative would require seven more commercial property acquisitions than the Grand Avenue Underpass Alternative and six residential acquisitions; the Grand Avenue Underpass Alternative would not require the acquisition of any residential structures.



Note: Drainage improvements not shown.

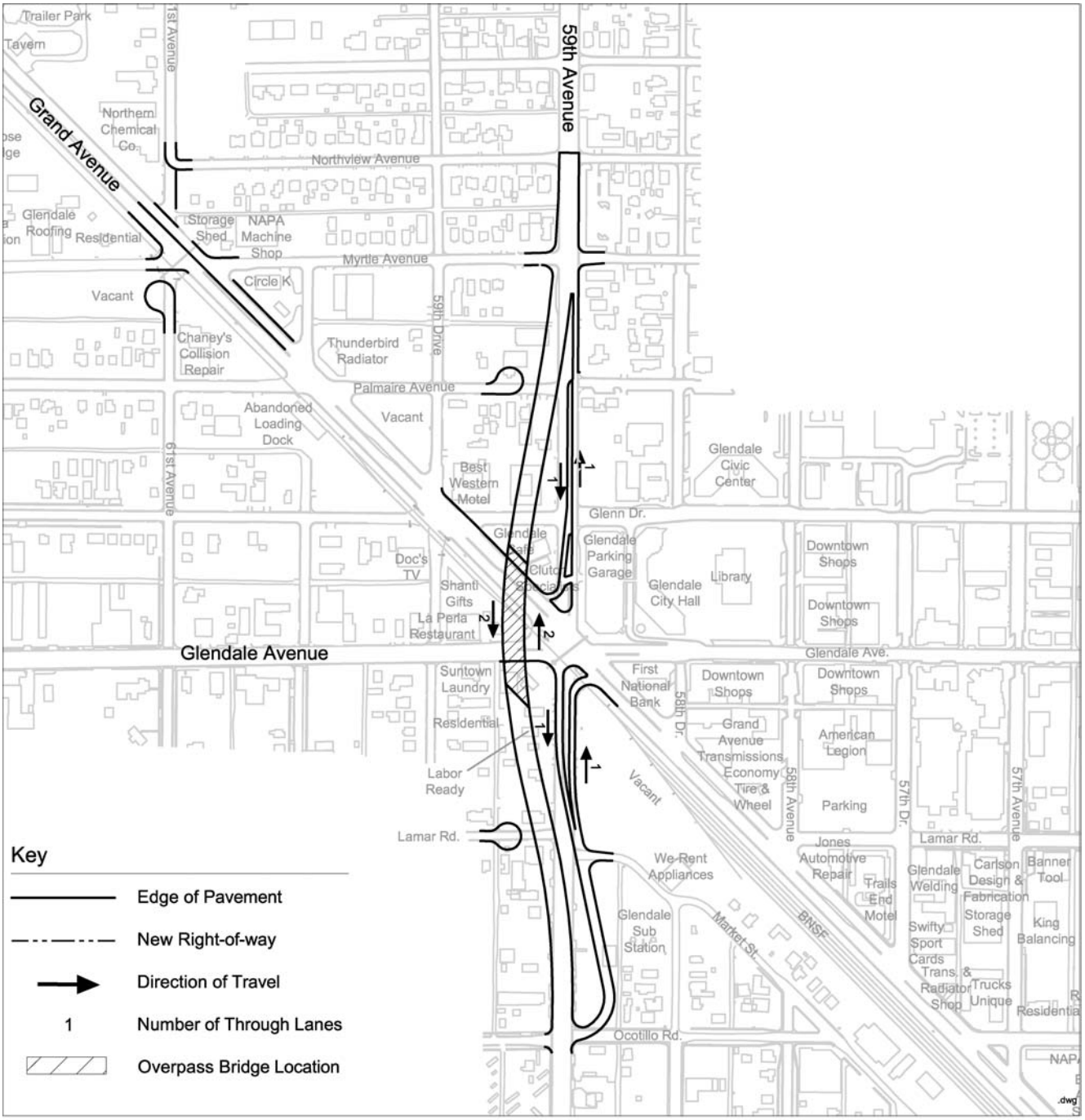
Figure 5. 59th Avenue Underpass Alternative

b. 59th Avenue Overpass Alternative

The 59th Avenue Overpass Alternative would provide 59th Avenue as a grade-separation overpass, meaning 59th Avenue would pass over both Grand and Glendale Avenues (Figure 6). The alignment would be similar to the 59th Avenue Underpass Alternative and would be shifted slightly to the west of the existing alignment. The overpass would be constructed as a four-lane roadway (two lanes in each direction) extending from Ocotillo Road to just north of Myrtle Avenue.

New connector roads would be constructed within the existing 59th Avenue alignment to provide local traffic circulation, provide local access to remaining residences and businesses, and provide access to the City of Glendale City Hall. Similar to the Grand Avenue Underpass Alternative, a new traffic light would be required at the 59th Avenue and Ocotillo Road intersection, and the existing traffic signal at the 59th Avenue and Myrtle Avenue intersection would remain unchanged. Drainage improvements would include approximately 1 mile of drainage pipes to convey roadway drainage and surface sheet flow water to an existing drainage basin located at the intersection of 67th and Northern Avenues. Approximately 11.1 acres of right-of-way would be required for construction of these improvements, directly impacting 22 commercial properties and 6 residential properties. The main difference in commercial and residential property acquisitions when comparing the 59th Avenue Underpass and Overpass alternatives is attributable to the embankment requirements for the overpass alternative.

Similar to the 59th Avenue Underpass Alternative, the remaining Grand Avenue and Glendale Avenue intersection would operate at LOS F during both the morning (104 seconds per vehicle) and afternoon (119 seconds per vehicle) peak travel periods. The 59th Avenue Overpass Alternative was projected to result in five business cessations. The estimated construction costs would be approximately $23 million. The 59th Avenue Overpass Alternative was eliminated from further consideration by the ASC because 1) total vehicular delay would remain a LOS F, compared to the Grand Avenue Underpass Alternative (which would reduce vehicular delay to a LOS D/LOS F)(refer to Table 3); 2) the 59th Avenue Overpass Alternative would require 14 more commercial property acquisitions than the Grand Avenue Underpass Alternative and six more commercial property acquisitions than the 59th Avenue Underpass Alternative; and 3) it would require six residential acquisitions.



Note: Drainage improvements not shown.

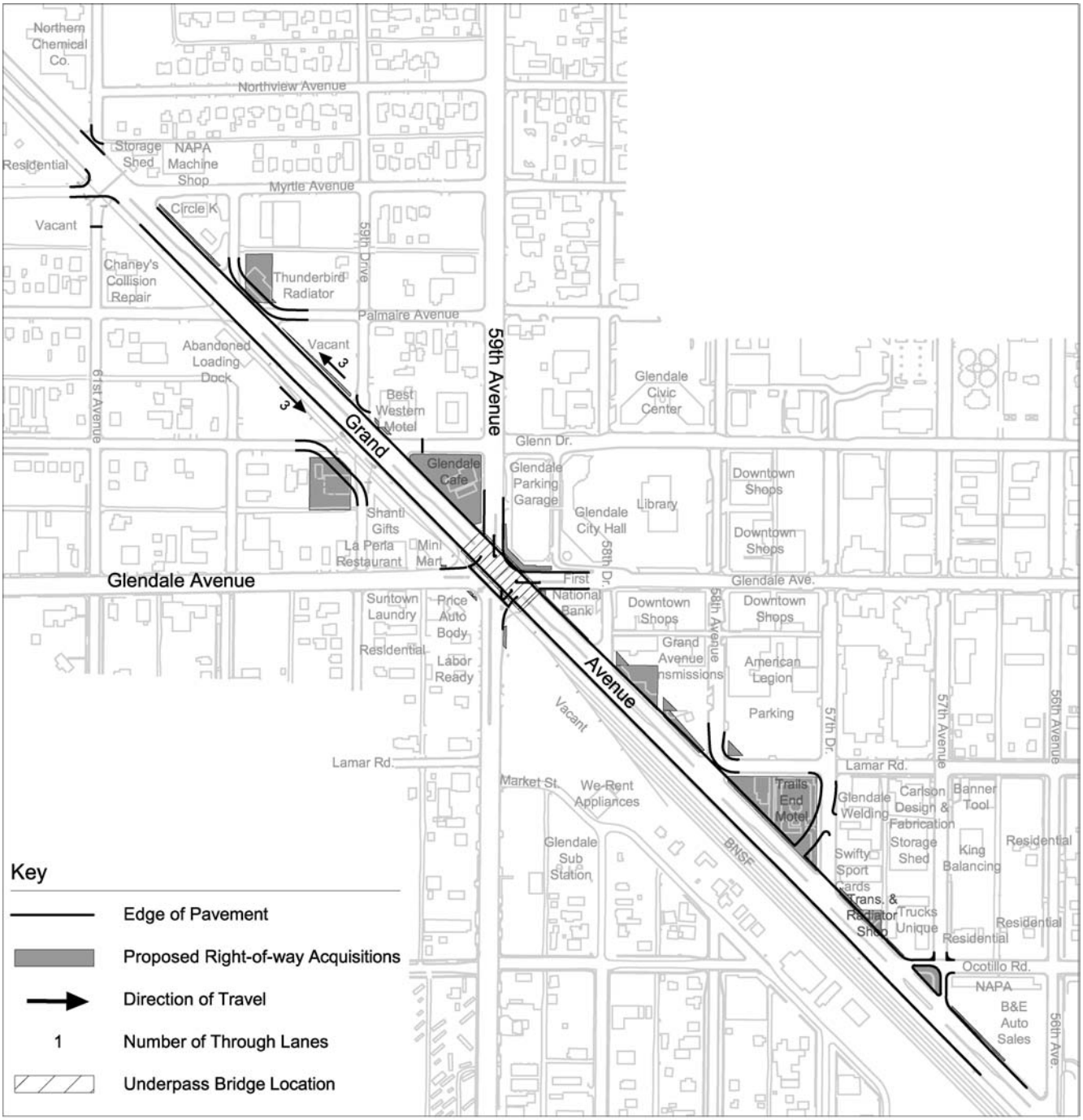
Figure 6. 59th Avenue Overpass Alternative

B. Grand Avenue Underpass (Preferred Alternative)

This alternative would reconstruct Grand Avenue as a grade-separation underpass, meaning that Grand Avenue would pass underneath Glendale and 59th Avenues (Figure 7). The reconstructed Grand Avenue would follow essentially the same alignment with slight modifications (e.g., widening) to the northeast side of Grand Avenue. The majority of the improvements would extend between Ocotillo Road to just north of Myrtle Avenue; drainage pipes would be installed along the existing Grand Avenue alignment north to an existing detention basin at the intersection of 67th and Northern Avenues. The roadway portion of the reconstructed Grand Avenue would consist of three lanes in each direction, which matches the existing lane configuration.

Access to Grand Avenue from adjacent streets, and to downtown Glendale for through traffic, would be provided along Myrtle Avenue, Ocotillo Road, and 57th Drive. Direct access from 58th Avenue, 58th Drive, Glenn Drive, 59th Drive, 61st Avenue, and Palmaire Avenue to Grand Avenue would not be provided. Modified frontage roads would be constructed to connect Palmaire and Myrtle Avenues (north of Grand Avenue), Glenn and 59th Drives (south of Grand Avenue), and 58th Avenue and Lamar Road (north of grand Avenue). Northwest-bound traffic would be able to exit Grand Avenue on 57th Avenue (which would be one-way south of Ocotillo Road). Motorists traveling westbound on Ocotillo Road would be able to gain access to northwest-bound Grand Avenue.

Approximately 3.3 acres of right-of-way would be required for the construction of the Grand Avenue Underpass Alternative. No residential structures would be acquired; however, eight total-take commercial parcels would be acquired. The remaining Glendale and 59th Avenue intersection would operate at LOS D (39 seconds per vehicle) during the morning peak travel period and LOS F (82 seconds per vehicle) during the afternoon peak. The Grand Avenue Underpass Alternative was projected to result in 18-22 business cessations (this represents the number of businesses expected to close as a result of the project, not the number of business structures that would be required for right-of-way). This alternative is estimated to cost approximately $30 million to construct. The Grand Avenue Underpass Alternative was identified as the Preferred Alternative by the ASC because 1) the remaining Glendale and 59th Avenue intersection delay times are substantially less than either of the 59th Avenue Alternatives and 2) the amount of right-of-way and number of acquisitions of commercial and residential properties are substantially less than the 59th Avenue Alternatives.



Note: Drainage improvements within the Grand Avenue roadway extend to existing detention basin near 67th and Northern Avenues and will not require new right-of-way.

Figure 7. Grand Avenue Underpass (Preferred Alternative)

IV. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The following information describes the affected environment within the project area and presents effects that may occur from implementing the proposed project. Measures to avoid or minimize impacts have also been identified and are summarized in the mitigation measures at the beginning of this document. The agency and public involvement activities undertaken as part of the environmental process are presented in Chapter V.

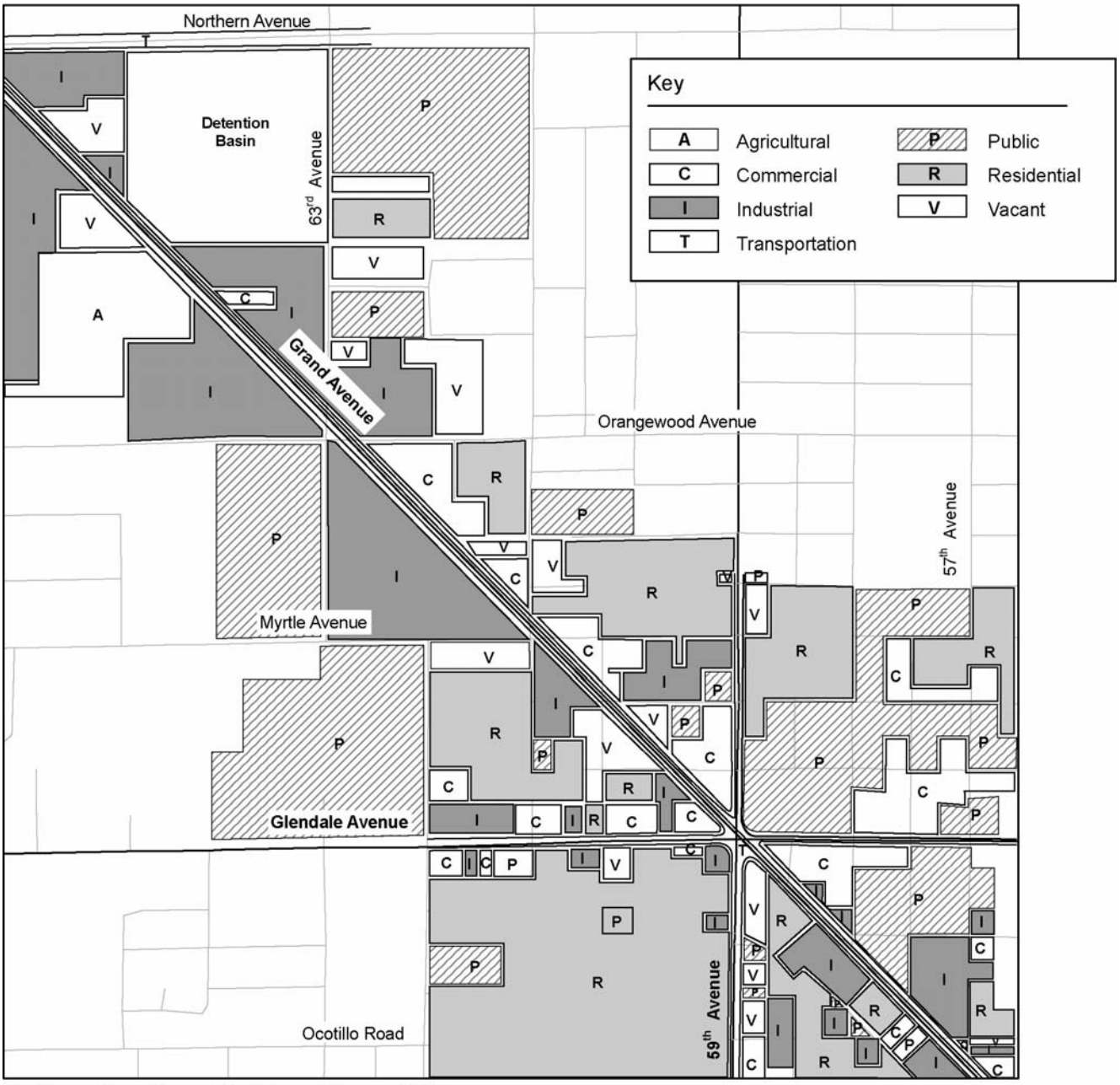
A. Ownership, Jurisdiction, and Land Use

For the purposes of this EA, land ownership is identified in terms of public or private ownership. Jurisdiction implies the authority to regulate land uses. Land in the project area is under the jurisdiction of the City of Glendale. Land ownership includes BNSF, ADOT, the City of Glendale, and private land holdings.

Existing land uses within the project area are residential, industrial, commercial, public/quasi-public, transportation (BNSF and roadways), and vacant (refer to Figure 8). According to the 1996 ***Glendale General Plan***, the project area is located entirely within the Downtown Redevelopment Area. Zoning details include lands identified as downtown office, general office, city hall, pedestrian retail, light industrial, and residential (refer to Figure 9). The residential areas are zoned for 20-30 residential units per acre.

The Preferred Alternative would require the acquisition of approximately 3.3 acres of new right-of-way, which would impact 25 parcels (9 total takes, 16 are partial takes)[1]; additionally, two temporary construction easements would be required. This acquisition would impact 20 property owners and require 8 commercial relocations. Existing land uses of the 25 parcels are transportation (2 partial takes), public/quasi-public (5 partial takes from the City of Glendale), vacant (1 total take, 1 partial take), commercial (8 total takes and 7 partial takes; however, one of the partial takes would require the acquisition of one business structure), residential (1 partial take; this property is currently vacant and has been condemned by the City of Glendale as uninhabitable). Even though a portion of the Downtown Redevelopment Area (which encompasses the entire project area) would be permanently

[1] A total take is acquisition of an entire parcel; a partial take is acquisition of part of a parcel.



Base Source: Arizona Transportation System GIS Coverage (2002)

Figure 8. Existing Land Use

Source: City of Glendale 2025 General Plan

Key

C	Commercial	O	Office
E	Entertainment Mixed-use	P	Public
I	Industrial	PA	Parks and Open Space
MU	Mixed Use	R	Residential

Miles

0 0.25 0.5

NORTH

Figure 9. General Plan Designated Land Use

removed for the proposed improvements, this removal would not compromise the intended redevelopment of the area because access would still be provided along Grand Avenue-but not in the underpass portion from Ocotillo Road to Myrtle Avenue.

Because Grand Avenue would be constructed as an underpass, access from Grand Avenue to adjacent properties within the project area would be more difficult. Motorists would be required to travel along Myrtle Avenue, 57th Avenue, 57th Drive, 59th Avenue, or Glendale Avenue to gain access to these areas.

Property owners would be compensated at market value for property acquired for project right-of-way in accordance with the ***Uniform Relocation Assistance and Real Property Acquisition Policies Act***, as amended in 1987.

B. Social and Economic Considerations

ADOT ensures that possible economic, social, and environmental effects have been fully considered in developing the project and that the final decisions on the project are made in the best overall public interest, taking into account the need for fast, safe, and efficient transportation; public services; and the cost of eliminating or minimizing adverse effects. The following information specifically identifies and evaluates those impacts that may occur on the social and economic environment within the proposed project area. Specific topics to be evaluated in this section include 1) economic impacts; 2) neighborhood continuity; 3) social services, schools, and recreation; 4) emergency services; 5) relocations/displacements; and 6) temporary and/or permanent impacts to access and traffic patterns.

1. Economic Impacts

An economic impact analysis was completed for the project area and vicinity, ***Assessment of Potential Economic Effects From Proposed Roadway Improvements at the Grand Avenue, Glendale Avenue and 59th Avenue Intersection*** (ADOT 2001). The purpose of the assessment was to estimate business losses that could occur in the area because of 1) disruption of normal traffic flows during construction of intersection improvements and 2) post-construction traffic flow and/or vehicular access. The economic impact analysis identified three study area designations based on factors that included construction limits, detour routes, and traffic control locations related to closures (Figure 10).

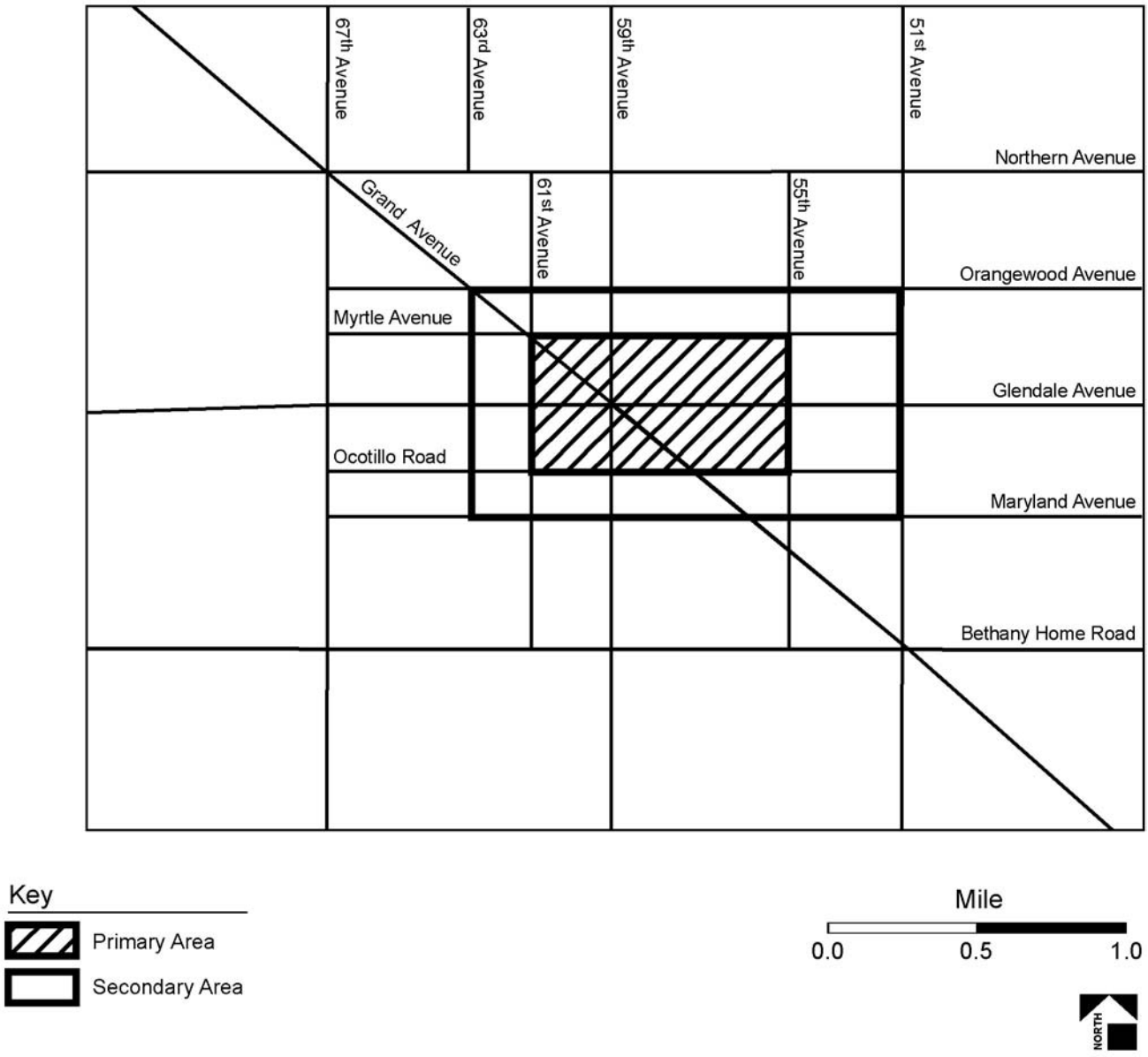


Figure 10. Economic Analysis Study Areas

The Primary Study Area is bound by Myrtle Avenue to the north, Ocotillo Road to the south, 61st Avenue to the west, and 55th Avenue to the east. The Secondary Study Area is bound by Orangewood Avenue to the north, Maryland Avenue to the south, 63rd Avenue to the west, and 51st Avenue to the east. A Special Investigation Area (a special study area identified by the City of Glendale) consists of auto dealers located along Glendale Avenue east of 51st Avenue. In all, data were collected on 128 businesses in the project area, which constitute about one-third of the business base in the primary and secondary areas.

Projected economic losses in the downtown area are divided into two categories: losses due to customers generally avoiding the area and losses due to businesses that may close or relocate. Both of these categories of losses are expected to be short-term, starting from the time the decision is made to go forward with the project and ending 3 years after construction is completed. Results of the analysis indicate that construction activity is expected to result in a short-term, overall reduction in business activity in the downtown area as customers avoid the inconvenience associated with construction (ADOT 2001). This short-term loss of business activity due to customer avoidance of downtown Glendale is projected to be between $3.6 and $4.2 million in total revenues (Table 4). This may correlate to a reduction of city sales tax revenues of between $49,684 and $56,438. Three years after the completion of construction this loss is expected to diminish to zero because business activity is expected to return to existing conditions.

In response to, or in anticipation of, the projected loss of revenues, it is estimated that 22 to 27 businesses may close or relocate (Table 4). As businesses vacate their current locations, approximately 4 to 5 businesses are anticipated to replace these closed or relocated businesses prior to the start of construction. Therefore, the net number of short-term business closures/relocations projected to occur as a result of construction of the Preferred Alternative is 18-22 (refer to Table 4). The loss of these businesses is projected to result in a short-term reduction in annual city sales tax revenues of $30,698-$37,406. Within 3 years after the completion of construction, closed/relocated businesses are expected to be replaced. Losses in City sales tax revenues would correspondingly diminish to zero as business activity returns to existing conditions.

Although construction of the Preferred Alternative may result in a net number of 18-22 business closures/relocations, these should be viewed in the context of business vulnerability in the study area. Project area businesses operate in a no- to low-growth business environment where they are more vulnerable to economic disruptions than areas of dynamic business growth. The results of the above

Table 4. Summary of Analysis of Projected Business Losses[1]

Impacts	Preferred Alternative[2]
Short-term losses from customer avoidance of the project area	$3,653, 242-$4,149,845
Short-term City sales tax losses, from customer avoidance of the project area	$49,684-$56,438
Number of business closures/relocations	22-27
Business replacements	4-5
Net number of business closures/relocations	18-22
Maximum annual revenue losses from business closures/relocations[3]	$2,257,176-$2,750,458
Maximum annual City sales tax losses from business closures/relocations	$30,698-$37,406

Source: ADOT 2001

[1] The business losses in this table reflect losses from projected economic impacts, and do not reflect losses that are anticipated due to right-of-way acquisition.

[2] The numbers presented in this column represent data from two alternatives differentiated only by means of connecting motorists to the downtown Glendale area along existing connector roads (located on either the southwest or northeast sides of the grade-separation of Grand Avenue). Furthermore, the Preferred Alternative is a combination of these two alternatives and, therefore, it is reasonable to assume that numbers fall within these above-stated ranges.

[3] These maximum levels would vary from year-to-year and would have different start and stop times. None are expected to continue beyond 3 years after the completion of construction.

analysis do not take into account benefits that may be associated with the proposed improvements. These include 1) increased opportunities to develop/redevelop the west side of Grand Avenue by simplifying the six-legged Grand Avenue intersection, making the west side more accessible to the downtown; and 2) the opportunity to further differentiate the downtown area through providing a definitive "edge" at the Grand Avenue alignment. The short-term economic effects of the proposed project are expected to apply from the time the decision is made to go forward with the project to 3 years after construction is completed. By the end of this period, the downtown area is expected to fully recover its business base. Therefore, no long-term negative economic effects to the downtown area are anticipated.

To minimize the economic effects of the Preferred Alternative the following mitigation measures would be implemented:

- The public would be provided a minimum of 14 calendar days of advance notice of construction activities.
- The ADOT Phoenix Construction Office and ADOT Community Relations Office would coordinate with the City of Glendale to ensure media coverage of construction activities using citywide media.
- The contractor would place directional signs on alternate routes to downtown Glendale.

- Full one-way and two-way closures of 59th Avenue and Glendale Avenue would be scheduled to occur between February 15 and November 15 to minimize disruption to downtown Glendale.
- Pre-construction meetings would be scheduled with the downtown Glendale business community to inform it of the construction sequencing and road closures.

2. Neighborhood Continuity

Neighborhood continuity can be defined as the local area's connectivity or community cohesion among services including hospitals; government offices; schools; post offices; businesses; and even other residences by, from, or between other local residences. Impacts to neighborhood continuity can vary in magnitude between eliminating the above services altogether by way of direct takes of these properties to impacting the traffic or pedestrian flow (motorists or pedestrian) to and from these services.

Grand Avenue, due to its six travel lanes, high-volume traffic, and proximity to the BNSF tracks creates a barrier between those residents living southwest of Grand Avenue and their respective community services. As a result, these residents have to navigate across the six-legged intersection formed by Grand Avenue, 59th Avenue, Glendale Avenue, and the BNSF tracks, or attempt to find alternative routes when long traffic delays or train-related delays occur.

Neighborhood continuity is currently affected by Grand Avenue due to its six travel lanes and high traffic volume. The BNSF tracks also contribute to this barrier effect between the areas to the northeast and to the southwest. The improvements associated with Grand Avenue would directly impact 15 commercial businesses and one residential property for right-of-way requirements and may result in the possible net closure of 18-22 businesses due to economic effects, but would not likely contribute to further separation of any business centers or create any additional division of neighborhoods and their residents from any community services when compared to what currently exists today. Additionally, the improvements would result in a simpler intersection configuration, possibly increasing the flow of pedestrians and motorists from between the north and south sides of Grand Avenue in the vicinity of the 59th Avenue and Glendale Avenue Intersection. Therefore, no substantial impacts to neighborhood continuity would occur as a result of the Preferred Alternative.

3. Social Services, Schools, and Recreation

No schools occur within the project area. Two parks and the City of Glendale City Hall are located adjacent to the project area. Furthermore, sidewalks currently are located along the northeast side of Grand Avenue, and on both sides of 59th Avenue and Northern Avenue. According to the Maricopa Association of Governments' ***Metropolitan Phoenix Area Bike Ways Map*** (MAG 2001), no designated multi-use paths or bike routes would be impacted by the improvements associated with the Preferred Alternative. However, an identified popular undesignated bike route is located west of the Grand Avenue, 59th Avenue, and Glendale Avenue intersection. This undesignated route links those residential areas south of Glendale Avenue (approximately south to Bethany Home Road) to Glendale Community College, located at 59th Avenue and Olive Avenue.

4. Emergency Services

The City of Glendale currently has seven fire stations providing community services to residents. However, no fire stations occur within the project area. The closest station to the project area is Glendale Fire Station Number 51, which is located approximately 1.25 miles east of the project area at 55th Avenue and Orangewood Avenue. The fire services within the city of Glendale, as well as most other cities within the Phoenix Metropolitan Area, use the Regional Dispatch System operated by the City of Phoenix Fire Department; units from each participating city are dispatched as if they were one single fire department.

Ambulance services and police services are provided by the City of Glendale. Ambulance services are typically a part of the individual fire station or, in some cases, provided by a contract service provider. Police services are typically assigned patrols or routes and cover the entire jurisdiction of Glendale. No hospitals occur within or adjacent to the project area.

Emergency services (e.g., police, fire, ambulance) would be affected by the full closures associated with the construction of the Preferred Alternative. The Phoenix Construction District Office would coordinate with the City of Glendale Police and Fire Chiefs prior to and during construction to coordinate anticipated closure dates and durations as part of a Transportation System Management (TSM) Program. TSM Programs create committees, which are generally formed on major urban freeway construction projects, to facilitate communication of anticipated disruptions to key stakeholders (e.g., local jurisdictions, neighborhood and business communities). Because ADOT would coordinate with local emergency services departments prior to construction, the impact of the Preferred Alternative to emergency services would not be substantial.

5. Relocations/Displacements

The Preferred Alternative would require the acquisition of 15 commercial parcels (8 total takes and 7 partial takes) and one residential property, and require 8 commercial relocations. The residential property is located on a commercial parcel and is vacant. Furthermore, this property has been condemned by the City of Glendale and is uninhabitable. Therefore there the Preferred Alternative would require commercial relocations/ displacements, but would not impact any residences.

Property owners would be compensated at fair market value for property acquired for project right-of-way in accordance with the ***Uniform Relocation Assistance and Real Property Acquisition Policies Act***, as amended in 1987.

6. Temporary and/or Permanent Impacts to Access and Traffic Patterns

Grand Avenue is a multimodal transportation corridor. Even though train, automobile, and truck travel are the primary means of transportation, bus routes and pedestrian and bicycle travel are also important transportation modes. The RPTA bus line provides routes along Grand Avenue and other arterials within the Grand Avenue corridor. Bus service within the project area includes the Yellow Line (Grand Avenue route), Route 24 (24th Street/Glendale Avenue), Route 59 (59th Avenue), Route 70 (Luke Link), and the Glendale Urban Shuttle. However, as a result of recent changes to the Grand Avenue corridor RPTA, in conjunction with the cities of Phoenix, Peoria, and Glendale, anticipate elimination of this line. All five of these bus services currently run through the intersection of 59th, Glendale, and Grand Avenues. The RPTA Yellow Line provides ridership between downtown Peoria, the state capitol, and downtown Tempe. In addition, two bus stops are located along Grand Avenue within the project, one on the northwest quadrant serving westbound riders and one on the southeast quadrant serving eastbound riders. Seven other bus stops are located near the intersection, providing locations for passengers to gain access to east, west, north, and south bus routes.

Impacts to the Yellow Line, Route 24, Route 59, Route 70, and the Glendale Urban Shuttle would occur as a result of full closures along Grand Avenue. The Preferred Alternative is anticipated to take approximately 52 weeks to construct and would require detour routes during two phases of construction. If the Yellow Line is not eliminated by RPTA then, due to grade-separation, the Yellow Line may be permanently disconnected from all other routes that service the project area where they intersect Grand Avenue. Modifications to the Glendale Urban Shuttle could be made by the City of Glendale so that impacts to this service are minimal. ADOT would coordinate with the RPTA to

address relocation of any temporarily or permanently impacted bus stops or bus routes during final design.

Temporary access restrictions and/or detours would be necessary during construction. Grand Avenue would be closed from all traffic between Myrtle Avenue and 57th Drive; Grand Avenue traffic would be diverted onto 56th Avenue or Myrtle Avenue for most of the construction duration. Regional traffic would be diverted around the project area, signs would direct motorists to use I-10 and State Route 101 Loop (SR101L) to travel between downtown Phoenix and the west valley (west of New River) (Figure 11). Area traffic would be routed along other arterial streets. Motorists traveling southeast on Grand Avenue would be diverted onto Northern Avenue at 67th Avenue, east to 51st Avenue, and then south on 51st Avenue to Camelback Road, then east to the Grand Avenue intersection at 43rd Avenue. Southeast-bound Grand Avenue would be open to local traffic to Myrtle Avenue. Motorists traveling northwest on Grand Avenue would be detoured north on 51st Avenue to Northern Avenue, and then west on Northern Avenue to its intersection with Grand Avenue at 67th Avenue. Local northwest-bound traffic would have access on Grand Avenue to 57th Drive.

Construction of the bridge at 59th and Glendale Avenues would occur in two phases. During construction of the first phase of the underpass bridge at the 59th Avenue and Glendale Avenue intersection, through-traffic would be maintained along 59th Avenue (although diverted slightly to the west to avoid construction area); motorists traveling eastbound on Glendale Avenue would be diverted to either north- or southbound 59th Avenue (Figure 12). During the first phase of construction, northbound traffic on 59th Avenue would not be able to turn onto Glendale. During construction of the second phase of the underpass bridge, through-traffic would be maintained along Glendale Avenue (although diverted slightly to the south to avoid construction area). Turn movements allowed at the intersection during construction consist of northbound 59th Avenue to both east- and westbound Glendale Avenue, westbound Glendale Avenue to northbound 58th Drive, and eastbound Glendale Avenue to southbound 59th Avenue (Figure 12).

The City of Glendale has requested that no specific detours be signed for local street closures (including 59th and Glendale Avenues). When the Preferred Alternative is completed, Grand Avenue traffic would be required to use Myrtle Avenue or 57th Drive to gain access to downtown Glendale. Some out-of-direction travel (less than 1 mile) would be required along these local streets. Traffic control would be in accordance with Part VI of the current ***Manual on Uniform Traffic Control Devices for Streets and Highways***, published by the U.S. Department of Transportation, Federal Highway Administration (FHWA) (2000) and ADOTís Traffic Control Supplement (1996). Maintenance of traffic

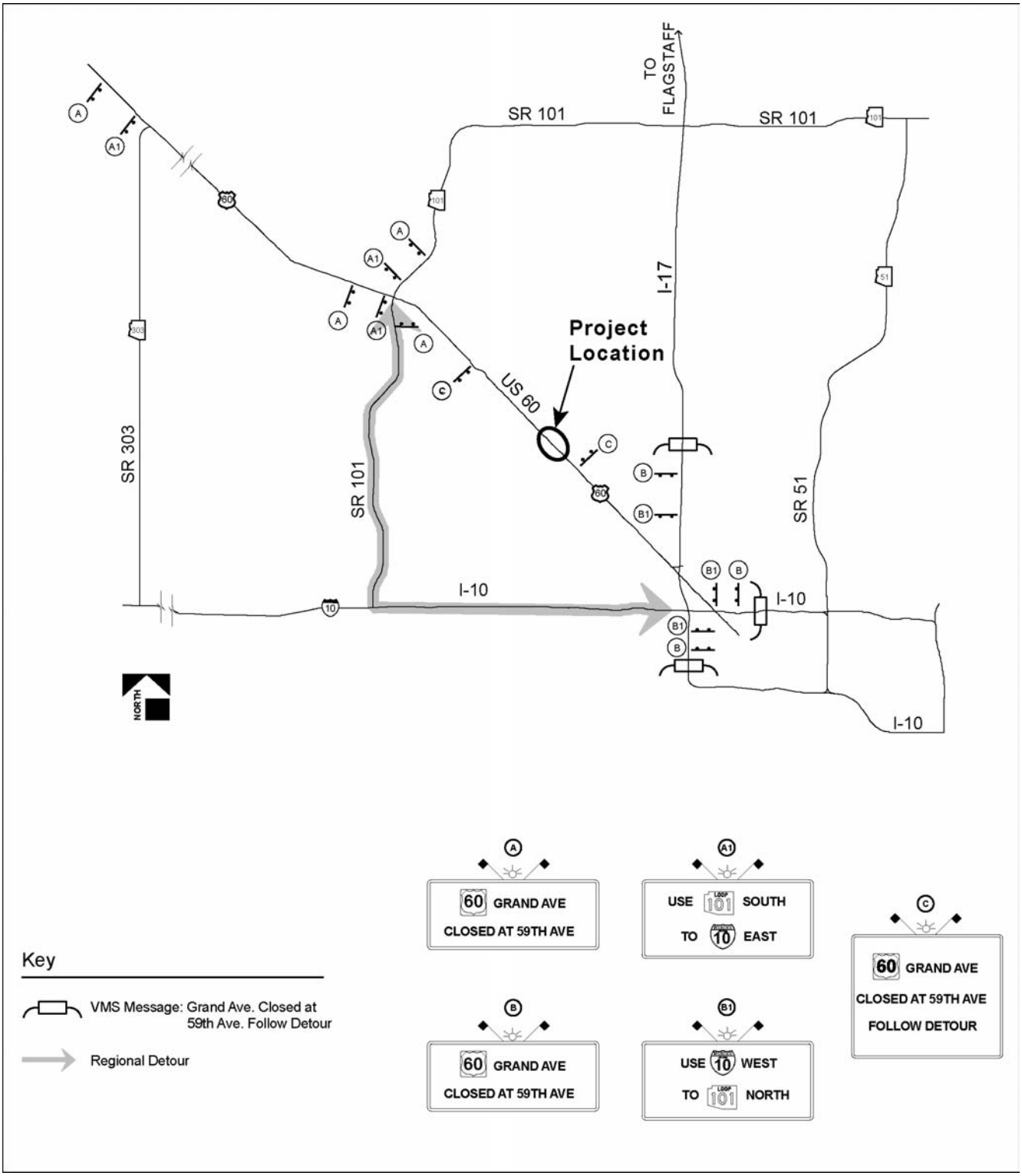
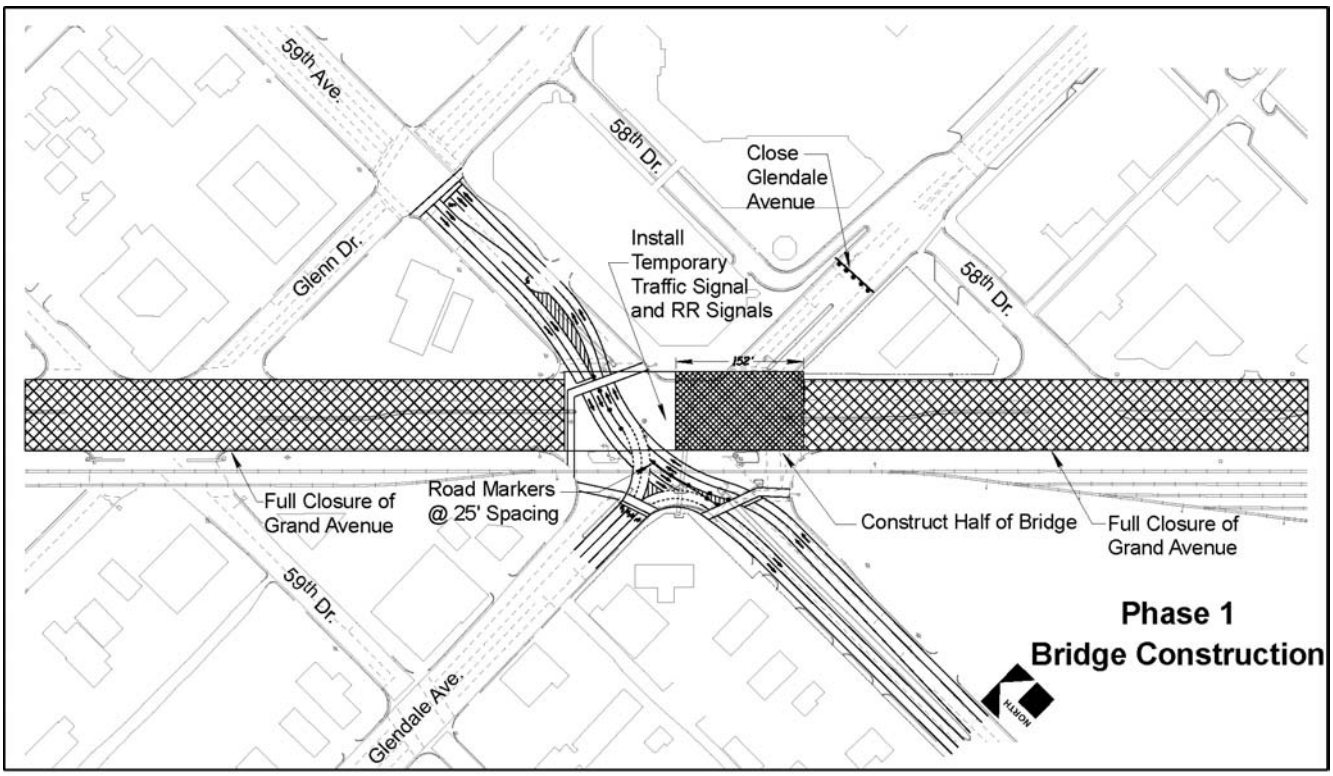


Figure 11. Regional Traffic Detours During Construction



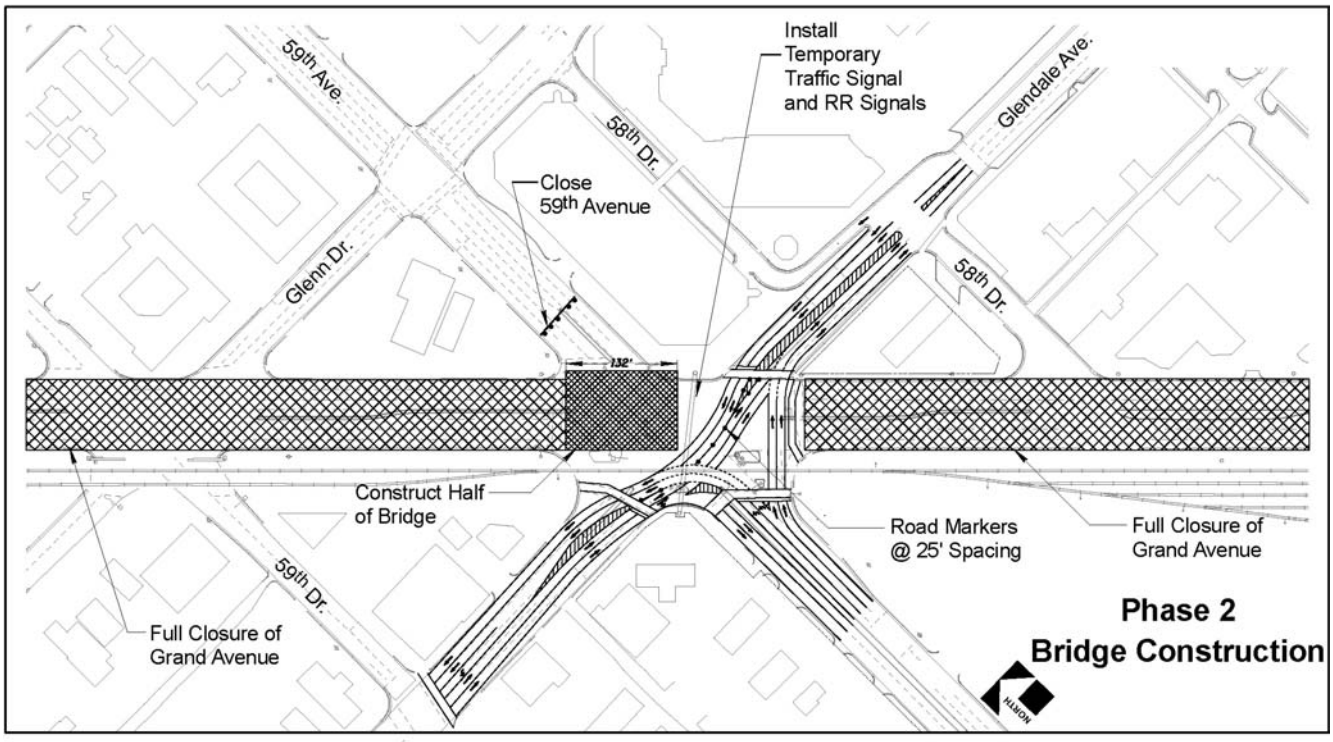


Figure 12. Traffic Diversions During Construction

and access would be addressed in the traffic control plan, which would be developed during final design. Key aspects to be evaluated would include 1) maintenance of traffic flow throughout the construction duration by using detour routes, 2) minimization of impacts to the BNSF mainline during construction, and 3) maintenance of traffic flow during utility relocations. ADOT would coordinate with BNSF during the development of the traffic control plan. Detours would be coordinated with adjacent projects to minimize conflicts.

Any sidewalks that would be temporarily closed during construction would be identified with signs, and alternative routes would be provided. The Project Office and the contractor would notify the public prior to any temporary access impacts to pedestrians or motorists through use of proper construction signing and news media advisories issued by the Arizona Department of Transportation Community Relations Office. Final details of any traffic or pedestrian restrictions would be evaluated during final design. With the exception of Grand Avenue, no full one-way or two-way traffic closures would be permitted between November 15 and February 15. ADOT would design, construct, and/or reconstruct new sidewalks or impacted sidewalks, respectively, within the Preferred Alternative's project limits to accommodate alternative transportation travel.

Because of the nature of the proposed project (grade-separation at an existing interchange), the duration of anticipated construction (approximately 52 weeks), and necessary associated detours of vehicular and nonmotorized transportation, construction of the Preferred Alternative would have substantial temporary and permanent impacts to access and traffic patterns.

C. Title VI/Environmental Justice

"Title VI of the Civil Rights Act of 1964" and related statutes (including state-level ADOT EEG Environmental Justice Guidance) ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. Executive Order 12898***, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations***, signed on February 11, 1994, directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

The demographic characteristics of the population of the project area were examined to determine whether protected populations would be disproportionately affected by the proposed project. These

protected populations include people who are of a minority race; of Hispanic ethnicity; older than 16 years of age who are either work-disabled, have self-care limitations, or have a mobility disability; members of households below the poverty level established for the 1995 Special Census for Maricopa County; greater than or equal to 60 years of age; and/or are a female who maintains a household with no spouse present while living with one or more people related to her by birth, marriage, or adoption.

Minority racial populations, as defined by the federal census, include the following racial categories: African American, American Indian/Eskimo and Aleut (Native American), Asian and Pacific Islander, and "other race." In the census, the category "Hispanic" does not define a race, but is instead an ethnicity. Therefore, the category "Hispanic" was used for all Hispanics (regardless of race) even for those who identified themselves as "White."

Data from the MAG 1995 Special Census of Maricopa County and the U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing were used to compare and contrast the demographic and economic characteristics of the project area with those of the City of Glendale and Maricopa County. Census tracts are small, relatively permanent statistical subdivisions of a county and do not cross county boundaries (refer to Figure 13). Block groups, as used in this document, are even smaller statistical subunits of census tracts (refer to Figure 14). For this document, block groups are used as the smallest level of census resolution representing 1990 census data.

Enumeration districts (EDs) are similar to block groups, but reflect information from the 1995 Special Census of Maricopa County (refer to Figure 14). The statistics reported may extend outside the project area; therefore, the exact population and demographic characteristics of the project area may vary from these data. In addition, shaded numbers in the following tables illustrate those represented census units with percentages greater than those of the respective city and/or county.

As identified in Table 5, the population of the project area is predominately Hispanic, an ED average of 64.4 percent. This percentage is approximately three times that of the city of Glendale or Maricopa County. Other notable minority percentages include Native American individuals within ED 928.0.326, at 25.1 percent, and the category "Other", with an overall ED average of 40.3 percent.

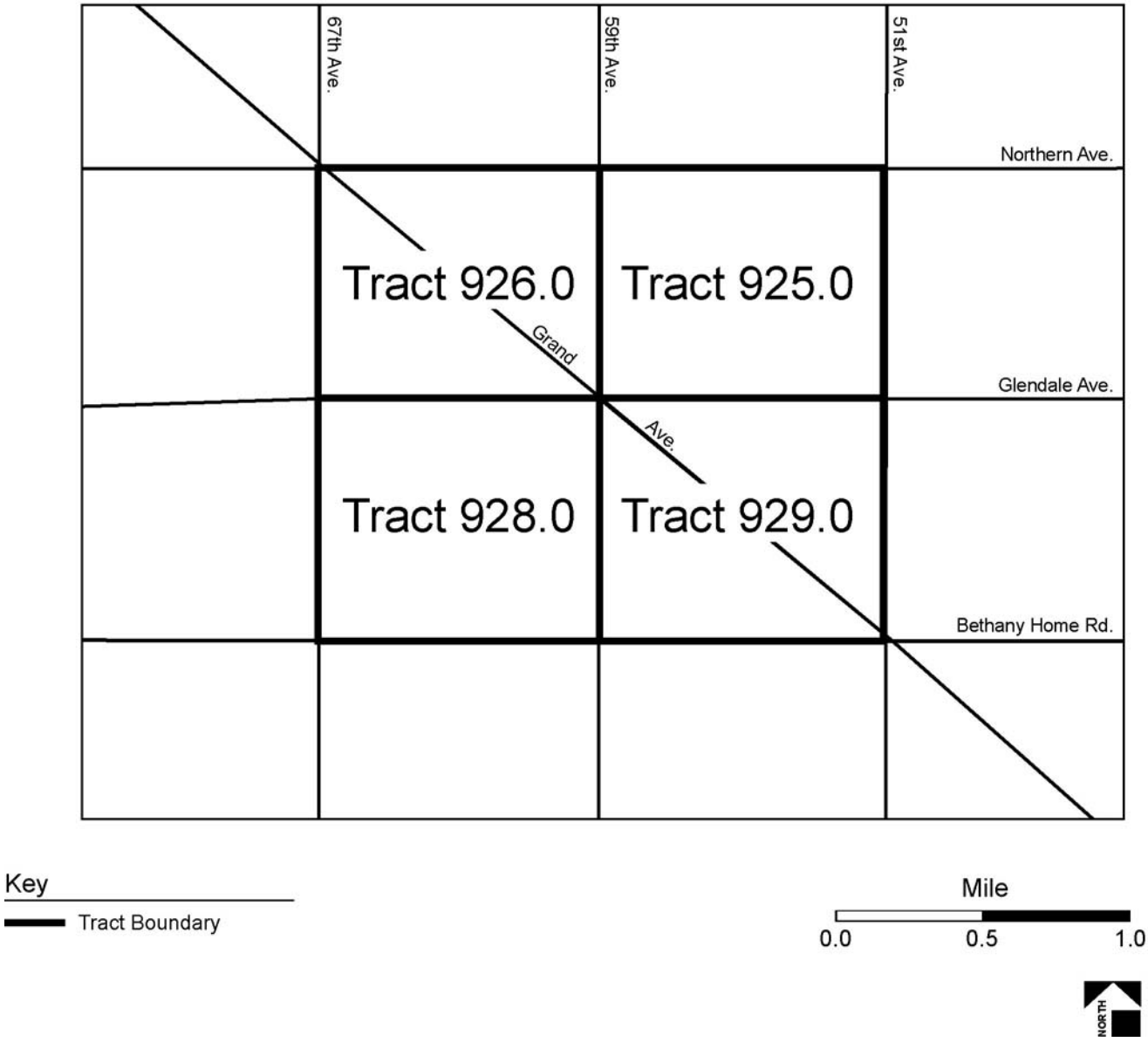


Figure 13. Census Tracts

Figure 14. Block Groups and Enumeration Districts

Table 5. 1995 Population, Ethnic, and Racial Demographics

Area	Total Population	White		African American		Native American		Asian		Other		Hispanic	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
ED 925.0.298	723	268	37.1	1	0.1	4	0.6	1	0.1	449	62.1	459	63.5
ED 925.0.299	355	126	35.5	8	2.3	6	1.7	6	1.7	209	58.9	223	62.8
ED 926.0.300	637	527	82.7	37	5.8	11	1.7	12	1.9	50	7.8	289	45.4
ED 926.0.301	726	700	96.4	13	1.8	5	0.7	8	1.1	0	0.0	199	27.4
ED 926.0.303	572	551	96.3	11	1.9	8	1.4	0	0.0	2	0.3	352	61.5
ED 926.0.304	433	415	95.8	11	2.5	6	1.4	1	0.2	0	0.0	264	61.0
ED 928.0.326	877	367	41.8	35	4.0	220	25.1	0	0.0	255	29.1	667	76.1
ED 928.0.333	740	293	39.6	23	3.1	27	3.6	2	0.3	395	53.4	472	63.8
ED 928.0.334	729	250	34.3	29	4.0	33	4.5	0	0.0	417	57.2	497	68.2
ED 929.0.340	791	36	4.6	10	1.3	2	0.3	1	0.1	742	93.8	758	95.8
ED 929.0.341	463	126	27.2	11	2.4	1	0.2	4	0.9	321	69.3	355	76.7
All EDs	7046	3659	51.9	189	2.7	323	4.6	35	0.5	2840	40.3	4535	64.4
City of Glendale	182,615	144,626	79.2	8129	4.5	2688	1.5	4353	2.4	22,819	12.5	36,093	19.8
Maricopa County	2,551,765	2,019,556	79.1	93,358	3.7	45,843	1.8	51,231	2.0	341,777	13.4	522,487	20.5

Source: Maricopa Association of Governments***. 1995 Special Census for Maricopa County: Summary Tables, September 1997.***

Note: % = Percent

Table 6 indicates that the largest representative population of those persons equal to or greater than 60 years of age occurs within ED 926.0.301, with 26.7 percent. Overall, the ED average is slightly less than the representative population percentage of Maricopa County, but slightly more than the city of Glendale.

Table 6. 1995 Percentage of Population Greater Than or Equal to 60 Years of Age

Area	Total Population	≥ 60 Years of Age	
		Number	Percentage
ED 925.0.298	723	96	13.3
ED 925.0.299	355	24	6.8
ED 926.0.300	637	87	13.7
ED 926.0.301	726	194	26.7
ED 926.0.303	572	73	12.8
ED 926.0.304	433	42	9.7
ED 928.0.326	877	89	10.1
ED 928.0.333	740	101	13.6
ED 928.0.334	729	64	8.8
ED 929.0.340	791	157	19.8
ED 929.0.341	463	64	13.8
All EDs	7046	991	14.1
City of Glendale	182,615	20,193	11.1
Maricopa County	2,551,765	411,213	16.1

Source: Maricopa Association of Governments. 1995 Special Census for Maricopa County: Summary Tables, September 1997.

Percentages of households living below poverty within the project area's EDs are approximately three times greater than those for both the city of Glendale and Maricopa County (refer to Table 7). Data obtained for Tract 929.00 indicate that its population percentage is four times higher than those of both the city of Glendale and Maricopa County. However, the smallest census unit for which MAG provides data for poverty is the tract level and, in this specific case, includes census information for households well outside of the proposed project area. No smaller geographic census-unit-level data were available for households living below poverty.

Table 7. 1995 Percentage of Households Living Below Poverty

Area	Households With Income Reported	Below Poverty	
		Number	Percentage
Tract 925.0	706	209	29.6
Tract 926.0	834	263	31.5
Tract 928.0	1946	653	33.6
Tract 929.0	586	255	43.5
All Tracts	4072	1380	33.9
City of Glendale	42,583	4857	11.4
Maricopa County	608,777	63,392	10.4

Source: Maricopa Association of Governments. 1995 Special Census for Maricopa County: Summary Tables, September 1997.

Table 8 indicates that the percentage of mobility disability near the proposed project was, on average, nearly twice as large as that of the city of Glendale or Maricopa County (refer to Table 8). In Block Group 926.0.2 the population percentage of mobility disability is 65 percent, or roughly five times the percentage of Maricopa County. Block Group 929.0.1 has twice the percentages of both the city of Glendale and Maricopa County.

Based on 1990 census data, the percentages of female heads of household within the project area block groups and in those of adjacent neighborhoods is generally higher than the percentages of Glendale or Maricopa County (refer to Table 9). Specifically, Block Group 929.0.1, on a percentage basis, has approximately three times the number of female heads of household than does Glendale or Maricopa County.

Table 8. 1990 Percentage of Population with Mobility Disability

Area	Population ≥16 Years of Age	Mobility Disability	
		Number	Percentage
Block Group 925.0.3	877	153	17.4
Block Group 926.0.2	40	26	65.0
Block Group 926.0.3	617	103	16.7
Block Group 926.0.4	764	159	20.8
Block Group 928.0.1	1333	269	20.2
Block Group 929.0.1	1261	337	26.7
Block Group 929.0.2	307	27	8.8
All Block Groups	5199	1074	20.7
City of Glendale	108,107	13,790	12.8
Maricopa County	1,595,853	207,610	13.0

Source: U.S. Department of Commerce, Bureau of the Census. 1990 Census of Population and Housing, Summary Tape File 3A for Arizona and Utah. 1992.

Table 9. 1990 Percentage of Female Head of Household

Area	Households	Female Head of Household	
		Number	Percentage
Block Group 925.0.3	391	55	14.1
Block Group 926.0.2	26	0	0.0
Block Group 926.0.3	294	37	12.6
Block Group 926.0.4	453	53	11.7
Block Group 928.0.1	656	139	21.2
Block Group 929.0.1	497	176	35.4
Block Group 929.0.2	114	18	15.8
All Block Groups	2431	478	19.7
City of Glendale	53,871	6463	12.0
Maricopa County	808,162	79,646	9.9

Source: U.S. Department of Commerce, Bureau of the Census. 1990 Census of Population and Housing, Summary Tape File 3A for Arizona and Utah. 1992.

As a result of census data obtained for the general project area during the early phases of project analysis, the following factors triggered a face-to-face survey of owners and managers of project-area businesses: 1) the identification of high percentages of Hispanics, 2) the existence of high percentages of elderly individuals (greater than 60 years of age), 3) a high percentage of low-income households, and 4) project improvements that may displace a protected population-related business or impact protected population employees and customers of those businesses. The survey was

designed specifically to obtain information about possible impacts to owners, employees, and customers of local businesses at the intersection to determine the status of those groups as protected populations (refer to Appendix A). Because no residential properties are located in the project area nor are proposed for new right-of-way acquisition (refer to Figures 7 and 8), the survey was limited to project-area businesses.

Impacts to protected populations can occur directly to business owners, employees, and customers through the relocation or loss of a business during project right-of-way acquisition, thereby eliminating or limiting revenue, the availability of goods and services, and employment opportunities in the local area. Construction-related impacts, such as traffic delays, parking restrictions, access changes, and short-term air quality and noise differences during and after construction, can indirectly affect businesses by increasing the hardship for employees to get to and from work, removing accessibility to goods and services at the business for customers, and decreasing revenue sources for the business owner. Only businesses that might be directly impacted by the proposed project were administered the survey; a total of 16 businesses met this criteria and were surveyed. Surveys were administered verbally and in-person to the owner/manager of each business that could be impacted; return visits or phone interviews were necessary in some cases to ensure that the owner/manager was available for the interview. Proposed project details and survey-question clarification were given to the owner/manager, when necessary. If a survey was needed to be done in Spanish, a phone call was made to the owner/manager by a Spanish-speaking interviewer.

Survey results indicated that most owners, employees, and customers used motor vehicles to gain access to the various business locations. As a result, the average employee and customer were reported to travel several miles to reach the intersection's businesses. Surveyed businesses, then, do not rely on local residents (those within the immediate vicinity of the proposed project) for employees or customers. While a majority of the business owners/managers identified themselves as White, those with more than two or three employees always reported "some" employees whose ethnicity or other personal characteristics fit the requirements of a protected population. Several businesses reported that "most" of their customers were Hispanic, elderly, or female heads of household, and all reported to have at least "some" of these customers. However, no pattern of responses concerning owners/managers, employees, or customers could be discerned because of the thoroughly mixed range of questionnaire answers from the various businesses at the intersection.

Each successive business differed noticeably in the numbers and types of protected persons associated with it, such that no distinct cluster of responses emerged with regard to the protected

status of owners/managers, employees, or customers. A similar mixed range of responses was noticed in business survey efforts at other nearby intersections along Grand Avenue that are also undergoing intersection improvements and are similarly impacting adjacent homes and businesses. This suggests that, while protected populations most certainly own, work at, and shop at the surveyed businesses, no distinct population of protected persons emerges in association with those businesses. The fact that employees and customers generally use motor vehicles to arrive at the businesses from, on average, several miles away, dilutes the use of these businesses by protected populations living adjacent to the project area. Any project at the Grand Avenue, 59th Avenue, and Glendale Avenue intersection would have a high probability of impacting some individuals of a protected population. However, as a result of the absence of a distinct protected population associated with the businesses, no disproportionate impacts were noted when evaluating both the possible impacts of business acquisition at the intersection by ADOT or when examining other construction-related impacts to those businesses stemming from implantation of the Preferred Alternative.

In summary, construction would affect persons (including those considered protected) who own, work at, or frequent businesses at the intersection. Fifteen commercial businesses and one vacant, condemned residential structure would be acquired partly or in full for project right-of-way; in addition to those acquisitions, construction of the Preferred Alternative might result in the possible net closure of 18-22 businesses due to economic impacts. The identification of high percentages of protected populations in the area surrounding the intersection triggered a survey of businesses that may be impacted by implementation of the proposed project. The surveyors inquired about the owners/mangers, employees, and customers of the establishments. Based on the mixed range of responses to the survey questionnaires, no distinct protected populations were identified among the businesses and no disproportionate impacts to protected populations could be reasonably expected from implementation of the proposed improvements. Therefore, the proposed project would not disproportionately impact protected populations.

D. Cultural Resources

Federal and state statutes have been enacted to provide protection for cultural resources and to ensure "future generations" a genuine opportunity to appreciate and enjoy the rich heritage of our nation (Public Law 89-665). Cultural resources (historic properties) must be evaluated under each of these acts to ensure adequate protection of our cultural heritage.

Historic properties include prehistoric and historic districts, sites, buildings, structures, or objects included in or eligible for inclusion in the Arizona or National Register of Historic Places (ARHP/NRHP). Historic properties may be eligible for nomination to the ARHP or NRHP if they "... possess integrity of location, design, setting, materials, workmanship, feeling and association ..." and if these resources are either associated with significant themes or persons in history, embody distinctive construction characteristics or works of a master, and/or have the potential to yield information important to history or prehistory.

An archaeological survey of the entire project area was completed in 2001 and documented in ***A Class III Archaeological Survey of Four Intersections Along Grand Avenue (US 60) (55th Avenue at Maryland Avenue, 59th Avenue at Glendale Avenue, 67th Avenue at Northern Avenue, and 75th Avenue at Olive Avenue), Maricopa County, Arizona*** (ADOT 2001). The archaeological survey did not identify any ARHP- or NRHP-eligible, or potentially eligible archaeological sites or features in the project limits.

Several historic property surveys have been conducted along this portion of Grand Avenue within the last 20 years. A recent assessment of historic resources within the project area was conducted in two phases. Phase I, an historic property reconnaissance survey, was undertaken by ADOT in April 2001 and documented in ***Historic Property Reconnaissance Survey Report for Selected Intersections along Grand Avenue*** (ADOT 2001). Several areas within and adjacent to the project area that would require additional investigation were identified. The results of the additional investigation are documented in ***Grand Avenue Intersections Phase II Historic Property Documentation and Evaluation*** (ADOT 2001).

The report ***Grand Avenue Intersections Phase II Historic Property Documentation and Evaluation*** identified four NRHP-listed properties: the First National Bank of Glendale, and three contributing properties to the Catlin Court Historic District (7141 N. 59th Ave., 7157 N. 59th Ave., and 5851 Myrtle Ave.) within or adjacent to the project area.

The First National Bank of Glendale is located on the northeast side of Grand Avenue (between Grand Avenue and Glendale Avenue) at the Grand Avenue, 59th Avenue, and Glendale Avenue intersection. As a part of the improvements associated with the underpass segment of the Preferred Alternative, a retaining wall would be constructed to stabilize the soil (e.g., side walls) and minimize right-of-way requirements along this segment. However, minor right-of-way acquisitions would still be required (approximately 4 acres total). The retaining wall would encroach on the parcel that contains the First National Bank of Glendale, but no adverse impacts would be anticipated because 1) no direct

impacts to the structure itself are anticipated and 2) only the front facade of the building is considered architecturally important, and this facade would not be impacted. ADOT recommended that the Preferred Alternative would not adversely affect the First National Bank.

Three contributing properties to the NRHP-listed Catlin Court Historic District (7141 N. 59th Ave., 7157 N. 59th Ave., and 5851 Myrtle Ave.) were also identified within or adjacent to the project area. ADOT recommended that neither the Catlin Court Historic District, nor these three NRHP-listed properties, would be adversely affected by the construction of the Preferred Alternative.

The State Historic Preservation Officer (SHPO) concurred with the recommendation that no historic properties would be adversely affected by the proposed project (refer to Appendix B). Therefore, no impacts to cultural resources would occur as a result of the proposed improvements. Early in the planning process, ADOT and several other agencies were signatories of a Programmatic Agreement to address cultural resources at eight project intersections within the Grand Avenue Corridor (refer to Appendix B). After project-specific funding was determined, ADOT committed to identifying, documenting, and treating all historic properties that may be present at this project intersection in a manner consistent with the terms of the Programmatic Agreement.

According to ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction***, Section 107 Legal Relations and Responsibility to Public (2000 Edition), (Standard Specification 107.05 Archaeological Features), if previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources. The Engineer would contact the ADOT Environmental & Enhancement Group, Historic Preservation Team, at 602.712.8636, immediately and make arrangements for the proper treatment of those resources.

E. Air Quality Analysis

The 1990 Clean Air Act Amendments require that air quality impacts be addressed in the preparation of the environmental document. Evaluating these impacts may vary from simple descriptions to detailed, microscale analyses, depending on factors such as the type of environmental document to be prepared, the project location and size, the micrometeorology of the project area, the air quality attainment status of the area, and the State Air Quality Standards.

The air quality analysis for the proposed improvements to the Grand Avenue, 59th Avenue, and Glendale Avenue intersection focused on vehicle emissions of carbon monoxide (CO). Other pollutants, such as particulate matter and oxides of nitrogen, are also components of vehicular emissions; however, the impacts from increased concentrations of CO are assessed as a project-level impact whereas particulate matter and end products of oxides of nitrogen (such as ozone [O_3]) are regional conditions.

An air quality study of this project area was completed in April 2002, ***Air Quality Assessment, Grand Avenue (US 60) Glendale Avenue/59th Avenue, Glendale, Arizona*** (ADOT 2002). The purpose of this study was to provide information regarding projected air quality changes as a result of the proposed project, to use in comparing existing and projected conditions with the 2025 No Build Alternative and with the proposed build alternatives. According to the study, receptors were located at or near existing and proposed rights-of-way, at sensitive land use areas, and/or at locations of anticipated maximum concentrations. Existing peak-hour traffic volumes and projected 2025 peak-hour traffic volumes were used for this analysis.

The project lies within an area designated as nonattainment for CO, O_3, and particulate matter (PM_{10}). The Phoenix CO and O_3 nonattainment area is defined as the boundaries of MAG's planning area. The Phoenix PM_{10} nonattainment area is an area within eastern Maricopa County measuring approximately 60 miles by 48 miles and an additional area within Pinal County that is 6 square miles. The proposed improvements are included in the approved Transportation Improvement Program and Transportation Plan for Fiscal Years 2002-2006, as approved by the Maricopa Association of Governments on July 25, 2001, which conforms to the State Implementation Plan and the Federal Implementation Plan. This project is, therefore, in conformity.

Maximum 1-hour and 8-hour concentrations of CO were obtained for the existing traffic conditions and roadway configurations (2002), the projected traffic conditions in 2025 with the current roadway configurations (No Build Alternative), and the projected traffic conditions for the Preferred Alternative. Under the No Build Alternative, maximum projected 1-hour concentrations of CO were generally higher than for the existing (2002) projected concentrations due to the increase in traffic volume projected for 2025. The projected 1-hour and 8-hour concentrations do not exceed federal or state standards. Under the National Ambient Air Quality Standard (NAAQS), the acceptable limit for CO concentration for the 1-hour averaging time is 35 parts per million, and for the 8-hour averaging time, 9 parts per million (refer to Table 10).

Table 10. Results of Air Quality Modeling

Scenario Modeled	Year	Maximum Afternoon CO Concentration (ppm[1])	
		1-Hour Averaging Time NAAQ Standard = 35 ppm	**8-Hour Averaging Time** NAAQ Standard = 9 ppm
Existing	2002	4.4-11.4	3.1-8.0
No Build Alternative	2025	4.3-9.7	3.0-6.8
Preferred Alternative	2025	4.2-6.9	2.9-4.8

Source: ADOT 2002.
[1]Parts per million

Projected maximum 1-hour and 8-hour concentrations associated with the Preferred Alternative were lower than those values obtained for the No Build Alternative. No projected concentrations exceed Federal or State Air Quality Standards. The CO concentrations projected for both the 2025 No Build and the Preferred Alternative are below the NAAQS (refer to Table 10). Proposed improvements to the Grand Avenue, 59th Avenue, and Glendale Avenue intersection are expected to reduce long-term impacts (i.e., those for design year 2025) on the area's air quality.

Under the Preferred Alternative, short-term impacts to CO may occur during construction because of the interruption of normal traffic flow. Efforts should be made to reduce traffic slowing, especially during the peak travel hours. Impacts to CO levels associated with the proposed alignment are considered minor. Short-term impacts to PM_{10} levels may also occur during the construction phase, but these impacts may be reduced through watering or other dust control measures. Because the Preferred Alternative would reduce traffic congestion at the remaining 59th Avenue and Glendale Avenue intersection, air quality impacts would be reduced (refer to Table 10). This reduction of impacts is also attributable to anticipated technological advances in vehicular emission systems by the design year 2025.

The contractor would comply with Maricopa County Rules 310 and 360 (refer to Appendix C) regarding fugitive dust emissions and new-source performance standards, respectively, during construction. Additionally, fugitive dust generated from construction activities would be controlled in accordance with the ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction***, Section 104.08 (2000 Edition), Stored Specification 104DUST (11/01/95), special provisions, and local rules or ordinances. In addition, the contractor would coordinate with ADOT EEG Air Quality Personnel (602.712.7767) during the planning of nighttime road closures or detours during winter months for air quality purposes.

The Preferred Alternative would result in decreased levels of CO and other pollutants as a result of the proposed improvements and improved vehicular emission systems by the 2025 design year. Therefore, the Preferred Alternative would beneficially affect the local and regional air quality.

F. Noise Analysis

An analysis of noise impacts that may occur as a result of the Preferred Alternative was conducted within the project area, pursuant to the ADOT Noise Abatement Policy (NAP), dated March 21, 2000, and in accordance with the provisions of Title 23 Code of Federal Regulations Part 772 - Procedures for Abatement of Highway Traffic Noise and Construction Noise. The analysis was documented in ***Noise Study Technical Report, Grand Avenue Underpass 59th Avenue and Glendale Avenue, Glendale, Arizona*** (ADOT 2002). The purpose of the noise study was to analyze the projected traffic-generated noise impacts from the proposed improvements as identified in the Preferred Alternative.

As identified in Table 11, Noise Abatement Criteria (NAC) are used to compare results of field monitoring. The NAC are formulated by combining land use designations with the acceptable exterior noise levels. The range of common indoor and outdoor noise levels is illustrated in Figure 15.

Table 11. Noise Abatement Criteria Hourly A-Weighted Sound Level (Decibels [dBA])

Activity Category	L_{Aeq1h}	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D		Undeveloped lands.

Source: 23 Code of Federal Regulations ß772

The decibel is a logarithmic unit that expresses the ratio of the sound pressure level being measured to a standard reference level. It has been found that the A scale on a sound-level meter best approximates the frequency response of the human ear (dBA). The hourly equivalent sound level, $L_{Aeq1h,}$ represents the A-weighted sound level which contains the same amount of acoustic energy as the actual time-varying, A-weighted sound level over one hour.

The NAC land use categories within or adjacent to the project area are Categories B (residences) and C (commercial businesses). ADOT's noise abatement policy states that abatement strategies should be considered when the noise levels "approach" or exceed 67 dBA for a Category B land use, or 72 for a Category C land use. The "approach" threshold as defined by ADOT is 3 dBA, i.e., 64 dBA for a

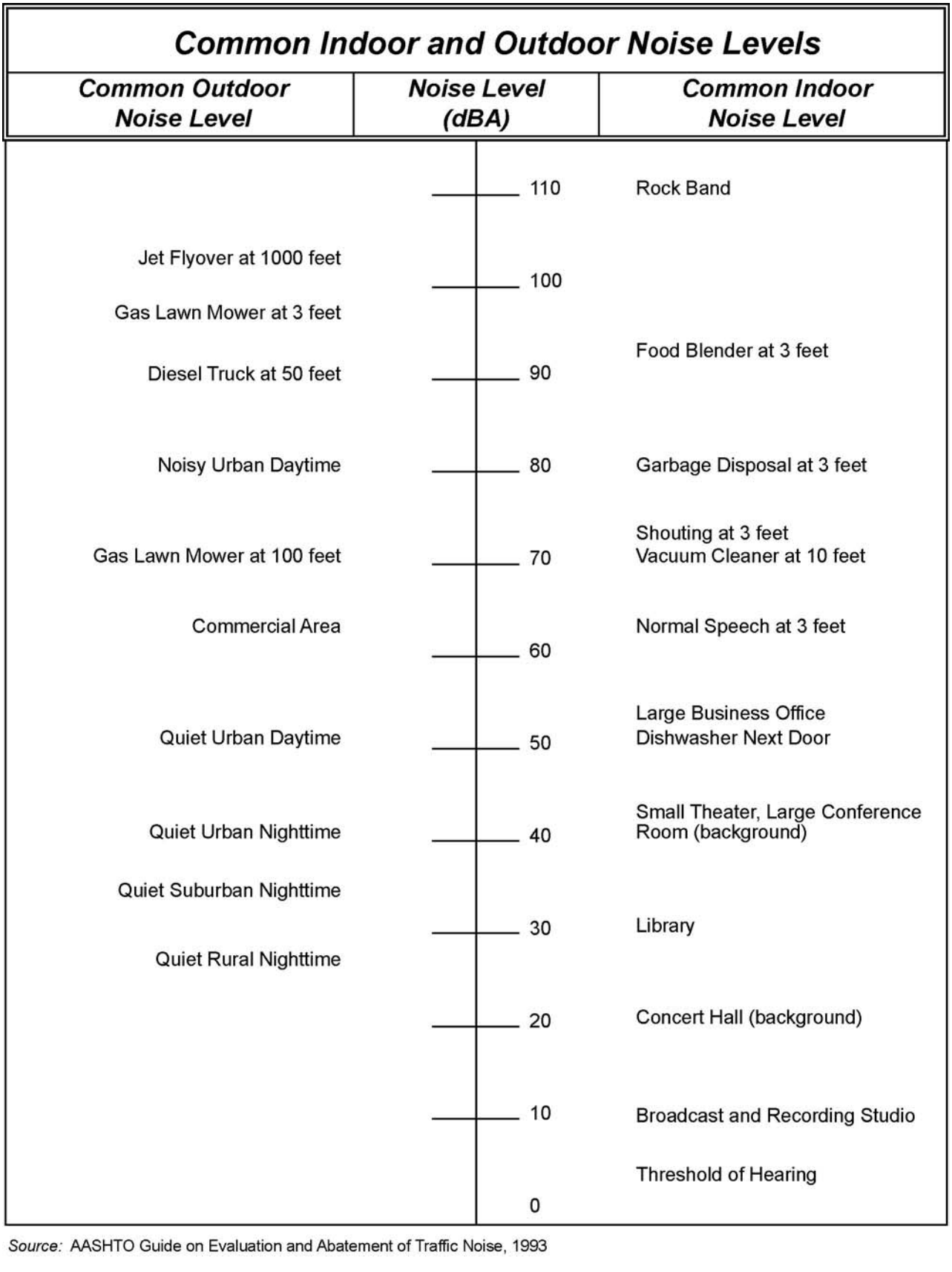
Category B land use and 69 dBA for a Category C land use, respectively. These guidelines also state that noise abatement should be considered when the noise levels "substantially exceed the existing noise levels." This criterion, as defined by ADOT, is an increase of 15 dBA or more above existing conditions. ADOT's policy does not provide for mitigation of commercial sites (classified under Activity Category C) or isolated receivers.[1]

Noise modeling was conducted at 38 receiver sites distributed throughout the project area (refer to Figure 16 and Table 12). These receiver sites were chosen because of their land use (Activity Category B) and/or proximity to the proposed roadway alignment. Existing noise levels generated from traffic along Grand Avenue were modeled using traffic conditions at 50 miles per hour. These speeds were based on observations cited in the ADOT Traffic study (ADOT 2001). Traffic volume information was also obtained from the ADOT traffic study.

Adjacent residences could experience short-term noise increases during construction. These increases are due to the equipment used during large construction-related projects. The quantification of such impacts is difficult to estimate without adequate data on the project's exact schedule and a detailed list of equipment to be used. Site clearing may involve an approximated temporary noise level of 88 dBA from either the operation of dozers and/or backhoes. Earthwork activities that involve either graders or belly scrapers may temporarily increase noise levels to 93 dBA.

Projected peak noise levels for 2025 under the Preferred Alternative range from 57 decibels to 66 decibels. The predicted future noise levels for the Preferred Alternative are at or above the 64-decibel approach threshold at six Category B sites (R-4, R-5, R-17, R-26, R-29, R-30). When the Preferred Alternative is compared to the 2025 no build conditions, one of these receiver sites is expected to show a decrease in decibel level (R-5), one would have no change (R-4), two are expected to be 1 decibel higher (R-29, R-30), one is calculated to be 2 decibels higher (R-26), and one is projected to be 4 decibels higher (R-17).

[1] According to ADOT's Noise Abatement Policy "An isolated receiver is defined as one or two sensitive affected receivers (e.g., residences) set apart from other receivers in the project area. It generally would not be considered reasonable to provide abatement for isolated receivers."



Source: AASHTO Guide on Evaluation and Abatement of Traffic Noise, 1993

Figure 15. Common Noise Levels

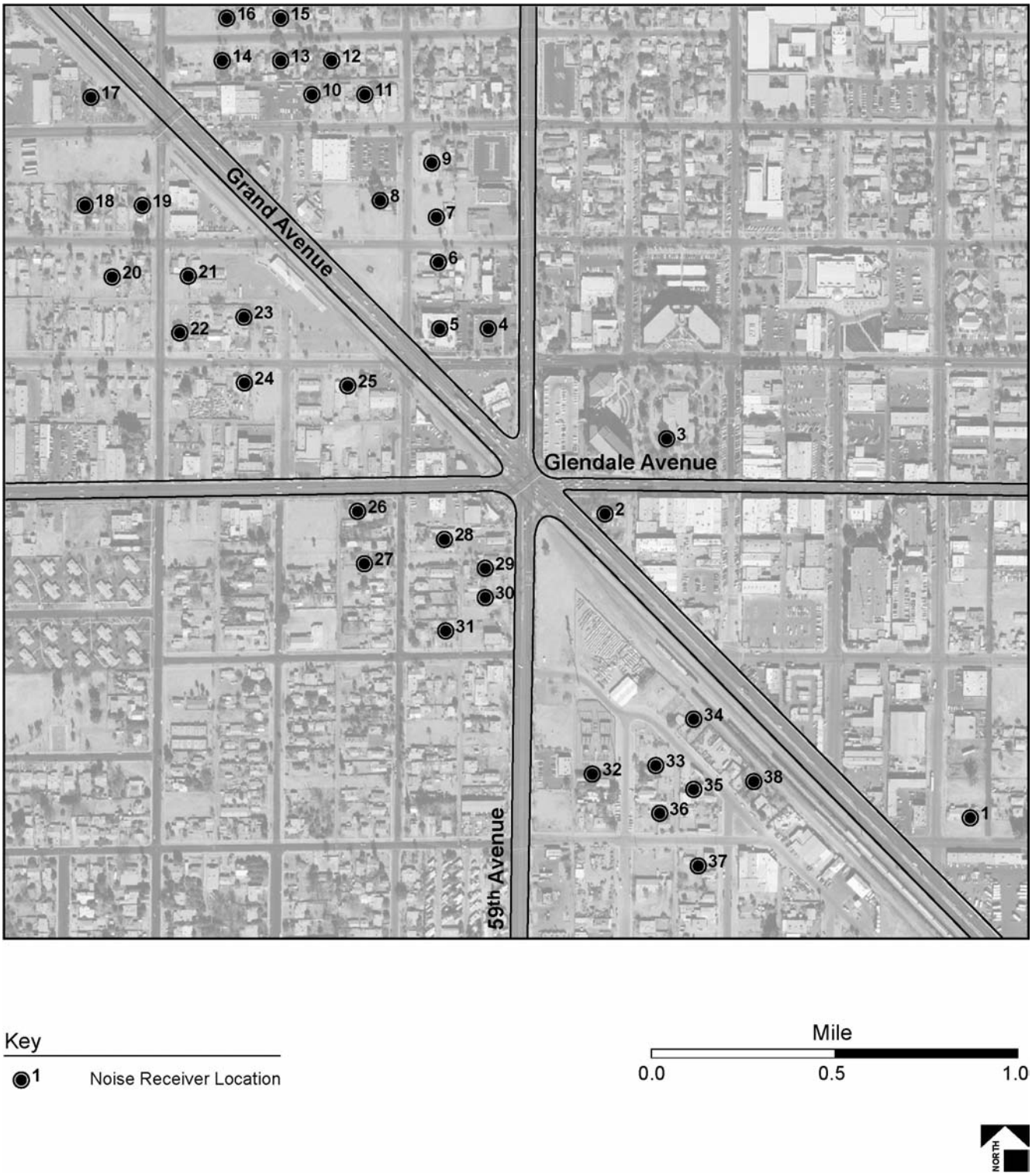


Figure 16. Locations of Noise Receivers

Table 12. Summary of Noise Analysis[1]

Receiver Site	NAC	Receiver Description	Existing	No Build	Preferred Alternative
			PM Peak (2000)	PM Peak (2025)	PM Peak (2025)
1	B	Residence	58	59	62
2	C[2]	First National Bank Building	**69**	**70**	66
3	B	Glendale Public Library	60	61	62
4	B	Best Western Motel-East Building	63	**64**	**64**
5	B	Best Western Motel-West Building	**64**	**65**	**64**
6	B	Residences	60	60	61
7	B	Residences	58	59	61
8	B	Residences	58	59	62
9	B	Residences	57	58	61
10	B	Residences	57	58	62
11	B	Residences	57	57	61
12	B	Residences	55	55	59
13	B	Residences	56	56	60
14	B	Residences	58	58	62
15	B	Residences	54	54	58
16	B	Residences	56	56	60
17	B	Residence	62	62	**66**
18	B	Residences	55	55	58
19	B	Residences	58	59	61
20	B	Residences	54	55	57
21	B	Residences	57	58	60
22	B	Residences	57	57	58
23	B	Residences	57	57	60
24	B	Residences	56	56	58
25	B	Residences	60	61	61
26	B	Residences	63	**64**	**66**
27	B	Residences	57	57	59
28	B	Residences	60	61	61
29	B	Residences	62	63	**64**
30	B	Residences	62	63	**64**
31	B	Residences	57	58	59
32	B	Residences	57	58	60
33	B	Residences	56	57	59
34	B	Residences	61	61	63
35	B	Residences	57	57	60
36	B	Residences	55	55	58
37	B	Residences	54	54	57
38	B	Residences	59	60	63

Source: ADOT 2002. [1] Shaded cells indicate those receptor sites at or above approach thresholds for consideration of mitigation. The approach threshold as for Category B receivers described in ADOTís Noise Abatement Policy is 67 decibels minus 3 or 64 decibels. [2] ADOTís Noise Abatement Policy does not provide for mitigation of commercial sites (Category C)

Because the receiver sites that indicate increases in sound levels (i.e., decibels) as a result of the proposed improvements associated with the Preferred Alternative are 1) at receivers where the outdoor use areas are located in the interior of the property (e.g., a plaza) and would not be impacted because of shielding from noise (R-4 and R-5), 2) sites where the receiver is considered an isolated receiver (R-17), or 3) sites where noise is generated from traffic along roads that would not be modified by the Preferred Alternative (R-26, R-29, and R-30), no mitigation is recommended or warranted. Therefore, the proposed improvements would not substantially impact the area's sound quality.

Construction noise would be controlled in accordance with the ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction***, Section 104.08 (2000 Edition), special provisions, and local rules or ordinances.

G. Visual Resources

In general, the visual character within the project area is dominated by commercial land uses, with residential areas bordering the project area. Several of the commercial buildings and adjacent residential neighborhoods are of historic age and, in some cases, designated as either historic properties or districts. Prominent built features within the project area include commercial developments, the BNSF tracks, traffic lights, street lighting, and billboards. The commercial buildings are constructed with a variety of materials and painted with a variety of colors. In addition, there is minimal landscaping associated with these commercial businesses, except for the nearby Glendale City Hall Complex located just northeast of the Grand Avenue, Glendale Avenue, and 59th Avenue intersection. Distant views of the Estrella Mountains to the south and the White Tank Mountains to the west can be seen from portions of the project area, although the development in the immediate area limits unimpeded or largely expansive views.

The construction and operation of the Grand Avenue grade-separation underpass would create minimal changes to the visual character and quality of the project area. Even though the construction of an underpass would remove a portion of the foreground features, the overall area aesthetics would not be substantially changed from existing conditions. Any affected public right-of-way would be landscaped with low-water-use plants or the area covered with an inert ground cover. Overall, the visual character of the project area would not substantially change because the proposed improvements would be below ground.

H. Invasive Species

Based upon Executive Order 13112, dated February 3, 1999, all projects must, "subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: i) prevent the introduction of invasive species; ii) detect and respond rapidly to, and control, populations of such species in a cost-effective and environmentally sound manner; iii) monitor invasive species populations accurately and reliably; and iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded."

The project area was surveyed by a qualified invasive species authority, and it was determined that there are no listed invasive species within the project boundaries. Therefore, this project will not result in the spread of invasive species.

The existing right-of-way has been previously cleared of native vegetation for the construction of the respective roads, commercial development, or residential areas within or adjacent to the proposed project area. The Preferred Alternative would require approximately 3.3 acres of new right-of-way for the construction of the proposed improvements. The area required to construct the proposed improvements would be cleared. To prevent the introduction of invasive species, all earth-moving and hauling equipment would be washed at the contractor's storage facility prior to entering the construction site. In addition, all disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity. Specifically, all embankment slopes would be landscaped with drought-tolerant plants and covered with an inert ground cover. Therefore, the Preferred Alternative would not result in the spread of invasive species.

I. Water Resources Considerations

A review of the Federal Emergency Management Agency and the Environmental Systems Research Institute Web site links to floodplain data for the project area indicates that portions of the project are located within a designated 100-year floodplain (refer to Figure 17). This flood-prone area abuts Grand Avenue along its northeast side approximately 0.1 mile northwest and 0.1 mile southeast of the Grand Avenue, 59th Avenue, and Glendale Avenue intersection. The limits of the floodplain extend northwesterly along Grand Avenue to beyond 67th Avenue, but terminate southeast of the Grand Avenue, 59th Avenue, and Glendale Avenue intersection prior to the 55th Avenue intersection.

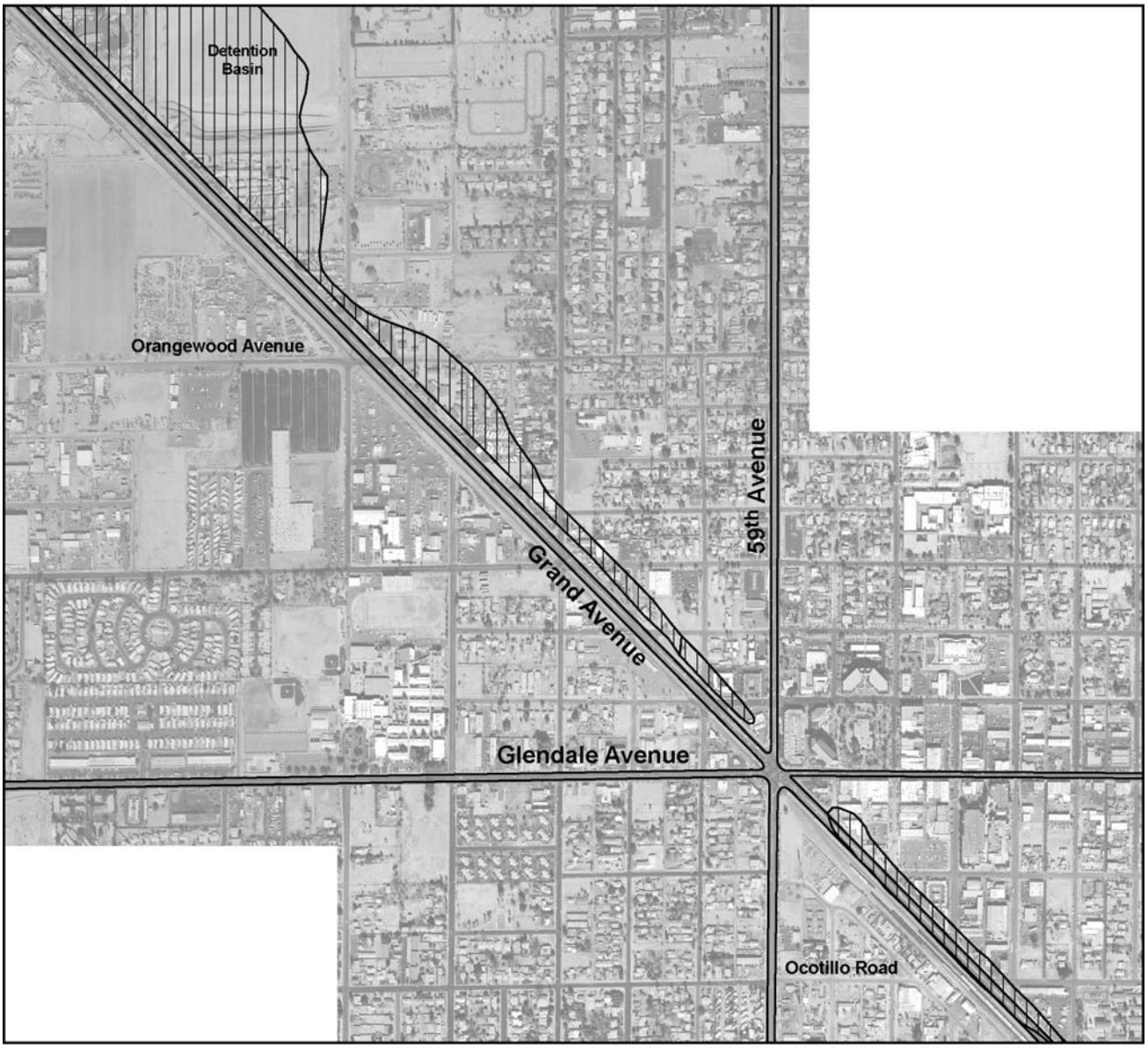
Impacts on floodplains typically occur when the topography is substantially modified either by placement or removal of materials. Currently, project-area surface water flows along the streets into storm water drainage systems, where provided. Otherwise, it flows along the surface across parcels in a southerly to southwesterly pattern.

The Preferred Alternative would include the construction of an underpass and, therefore, would require the removal of fill material within portions of the 100-year floodplain. A pump, to be located at the southwest corner of 59th Avenue and Glenn Drive, would be required to evacuate storm water that collects in the underpass. A connection to the existing storm drain near 57th Drive would be required to convey this water to an existing detention basin located just southeast of the Grand Avenue, Northern Avenue, and 67th Avenue intersection. Approximately 7,600 feet of pipe up to 96 inches in diameter would be used and routed primarily along Grand Avenue from just south of Ocotillo Road to the detention basin. Although the portion of Grand Avenue located northwest of Myrtle Avenue would be open to local traffic during construction, installation of drainage pipes in the segment between Myrtle Avenue and the detention basin would require a temporary reduction to one travel lane in each direction.

Short segments of drainage pipes would also be installed north of Grand Avenue, to connect the new drainage features to existing storm drains and drainage features within the alignments of Ocotillo Road, 57th Avenue, 57th Drive, 58th Avenue, and 60th Avenue. Additionally, the proposed improvements would require the installation of drainage pipes north of Grand Avenue within 59th Avenue and 59th Drive to Palmaire Avenue, and along Palmaire Avenue from 59th Avenue to Grand Avenue. The installation of drainage pipes in the Palmaire Avenue alignment is anticipated to require a full closure of this street.

New and modified drainage features would be designed to contain run-off from a minimum of a 10-year storm event from this site. Drainage facilities would be designed in accordance with ADOTís policies and standards. ADOT has coordinated with the City of Glendale floodplain administrator during the design of the drainage systems. During final design, ADOT would coordinate with, and submit design plans for review to, the City of Glendale floodplain administrator.

Because more than 1 acre of land would be disturbed, an Arizona Pollutant Discharge Elimination System (AZPDES) permit would be required. The Roadside Development Section would determine



Source: Q3 Flood Data, Federal Emergency Management Agency, 1997

Key

100-year Floodplain

Mile

0.00 0.25 0.50

NORTH

Figure 17. 100-year Floodplain

who would prepare the Storm Water Pollution Prevention Plan (SWPPP). The Phoenix Construction District Office and contractor would submit the Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality (ADEQ).

Construction materials would comply with ***Arizona Department of Transportation Standard Specifications for Road and Bridge Construction*** Section 104.09 (2000 edition). Excess concrete, curing agents, formwork, loose embankment materials, and fuel would not be disposed of within the project boundaries.

The proposed improvements would impact the existing floodplain and existing surface water flow patterns. However, because the project would include features to contain and/or maintain existing drainage patterns and minimize pooling, the Preferred Alternative would have no substantial impacts on the existing floodplain or project area surface water flow.

J. Hazardous Materials

ADOT EEG conducted a Preliminary Initial Site Assessment (PISA) for the presence of hazardous materials within the project area. The assessment included a field reconnaissance, review of applicable federal and state agency records, and a review of aerial photographs. The PISA identified eight parcels within the project area that would warrant Phase I Site Assessments prior to right-of-way acquisition. A Phase I Site Assessment is the industry standard to meet the "due diligence" requirements for hazardous materials investigations of the Comprehensive Environmental Response, Compensation, and Liability Act. Requirements for Phase I reports are defined by the American Society for Testing and Material.

Phase I site assessments and, if applicable, additional hazardous materials investigation and remediation would be completed by ADOT prior to right-of-way acquisition. According to ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction***, Section 107.07 (2000 Edition), if previously unidentified or suspected hazardous materials are encountered during construction, work would cease at that location and the Arizona Department of Transportation Engineer would be contacted to arrange for proper assessment, treatment, or disposal of those materials. The contractor shall not resume work in such locations until approved by the Engineer. The contractor would be responsible for obtaining any necessary asbestos permits for demolition of any structures done by the contractor.

Because the proposed project would involve the identification of hazardous sites or materials (and subsequent remediation, if applicable), the construction of the Preferred Alternative would be a beneficial impact to the project area concerning hazardous materials.

K. Utilities

The project area includes the following utilities: Arizona Public Service (APS) Power; Salt River Project (SRP) Agricultural Improvement and Power District (irrigation); Southwest Gas; Qwest Communications; MCI; Electric Lightwave; Cox Communications; and City of Glendale irrigation, storm and sanitary sewer. BNSF, APS Power, and SRP are claiming prior rights, an issue to be determined during final design.

The proposed improvements for the Preferred Alternative would not substantially impact any utilities or customers of these utilities because most of the relocations would involve either minor alterations to utilities such as raising power lines or would impact nonessential utility facilities. Utilities would be relocated by either the utility company itself or would be completed by the contractor as a phase of the construction efforts. Because most of the utility relocations would occur prior to project construction as a separate phase and no disruption of service is anticipated during construction, the Preferred Alternative would not substantially impact project-area utilities.

L. Material Sources and Waste Materials

The location and use of material source sites would be evaluated during final design. Any material sources required for this project outside of the project area would be examined for environmental effects, by the contractor, prior to use, through a separate environmental analysis in accordance with ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction,*** Section 1001 Material Sources (2000 Edition) (Stored Specification 1001.2 General).

Approximately 168,804 cubic yards of waste material is anticipated to be produced by construction of the proposed improvements associated with the Preferred Alternative. Excess waste material and construction debris would be disposed of at sites supplied by the contractor in accordance with ***Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*** Section 107.11, Protection and Restoration of Property and Landscape (2000 Edition). Disposal would be made at either municipal landfills approved under Title D of the Resource Conservation and Recovery Act, construction debris landfills approved under Article 3 of the Arizona Revised Statutes

(ARS) 49-241 (Aquifer Protection Permit) administered by the Arizona Department of Environmental Quality, or inert landfills.

Because of the requirements set forth in the above-mentioned regulations, the proposed project would not create an impact as a result of construction debris disposal.

M. Secondary Impacts

Secondary (indirect) impacts are broadly defined by the Council on Environmental Quality as those impacts that are caused by an action and occur later in time or are farther removed in distance but are still reasonably foreseeable after the action has been completed (40 CFR ß1508.8). They comprise a wide variety of secondary effects such as changes in land use, economic vitality, and population density. Secondary impact issues relevant to this project include access, noise, and visual quality. Secondary land use impacts were not considered because most of the project area has been developed for the last decade or longer, and most nearby vacant parcels would be purchased for the proposed improvements.

1. Multimodal Transportation Impacts and Access

The RPTA Yellow Line (Grand Avenue) may no longer function as it does today, and connections to other north-south bus routes, such as Routes 59 and 70 would not be possible at this intersection. However, based on the existing conditions on Grand Avenue and current ridership, RPTA is currently evaluating elimination of this line. During final design, ADOT would coordinate with RPTA to address relocation of impacted bus stops. Therefore, impacts to transit services are not anticipated to be substantial.

Specific commercial, retail, and residential marketability may improve within the project area due to the improved LOS of the remaining Grand Avenue, 59th Avenue, and Glendale Avenue intersection. Access points to the adjacent properties and any future expansion of the existing properties could be provided, but would occur from other local streets or intersecting arterials. Ingress and egress for both local residents and business employees and for nonlocal motorists seeking access to these sites could be provided.

2. Visual Impacts and Economic Vitality

The proposed grade-separation structure would not be visible from the surrounding residential areas. Because the structure would be constructed of modern design and materials, this upgrading of traffic facilities throughout the project area may be an overall improvement to the general visual quality of the project area.

Parcels in the project vicinity would also benefit from reduced traffic congestion and delay times, and from accessibility changes, which would improve ingress and egress conditions for shipping or receiving goods and/or for gaining access to adjacent neighborhoods. These changes could also improve future values of these properties. Because the actual results of these improvements would not be known until sometime after completion, the overall future economic vitality of the project area is unknown, although impacts are not anticipated to be substantial. Therefore, the proposed project would not substantially impact the visual character or economic vitality of the project area in the future.

N. Cumulative Effects

Cumulative effects are the combined impacts on the environment that result from the incremental effect of the proposed action when added to past, present, and reasonably foreseeable future actions within the immediate vicinity of the project area (40 CFR ß1508.7). These impacts are less defined than secondary effects. The cumulative effects of an action may be undetectable when viewed in the context of individual direct or indirect actions, but could add to a measurable environmental change. For this assessment, only those at-risk critical resources would be evaluated. These include past actions that have occurred since 1990 and foreseeable future actions, based on the best available information from the associated planning agencies. The majority of the development within the project area occurred prior to 1990.

1. Population Growth and Transportation Facility Development

The western part of the Phoenix Metropolitan Area is experiencing ongoing residential, commercial, and industrial development. The result of this growth is more population, employment, and revenue for the state and local jurisdictions and more demand upon the areaís transportation facilities. The population in Arizona has grown steadily over the past 30 years, increasing from 1,775,399 persons in 1970 to 5,130,632 in 2000. The City of Glendaleís population has increased from 147,864 in 1990 to 218,812 in 2000, a 48 percent increase. Maricopa County's population has grown from 971,228 in

1970 to 3,072,149 according to the 2000 Census. According to the Arizona Department of Economic Security, the 2020 population in Maricopa County is estimated to grow to nearly 4,516,090 people. Transportation improvements contribute to future development site selection. Because Grand Avenue is not the sole arterial street connecting the West Valley, it is unlikely that any proposed improvements to Grand Avenue would greatly increase or contribute to development site selection. Other key links to the West Valley such as I-10, SR101L, and Loop 303, and any improvements made to these facilities in the future would more likely be contributors that could promote development in the western part of the Phoenix Metropolitan Area.

The most influential future actions associated with this project are the proposed realignments of other intersections along Grand Avenue and any future considerations for expansion or implementation of expressway facilities. ADOT is considering making improvements at a total of eight sites between I-17 and the SR101L:

- 27th Avenue and Thomas Road (completed)
- 43rd Avenue and Camelback Road (under construction)
- 51st Avenue and Bethany Home Road (under construction)
- 55th Avenue and Maryland Road (approved for construction)
- 59th Avenue and Glendale Avenue (under study)
- 67th Avenue and Northern Avenue (under study)
- 75th Avenue and Olive Road (approved for construction)
- On-ramps to SR101L from 91st Avenue at its intersection with Cactus Road (completed)

Depending on scheduling of other proposed improvement projects along the Grand Avenue corridor, construction-related traffic impacts could limit or impact the overall function and use of Grand Avenue during these construction projects. Traffic control plans would mandate that all local access to businesses and residential areas be maintained during construction. In addition, projects would be scheduled to limit overlapping construction periods and also to limit the overall impacts to the operation and function of the Grand Avenue corridor. Motorists could be required, in some cases, such as identified in the Preferred Alternative for this analysis, to detour around construction zones; this would create longer travel times and be an inconvenience to motorists. It is not anticipated that these construction impacts would be substantial because they would be temporary.

Additionally, MAG has completed the Grand Avenue Northwest Corridor Study to assess improvements to Grand Avenue between SR101L and Loop 303. This study is an overall effort by MAG in the development of a new Regional Transportation Plan. The plan recommends additional action for the Grand Avenue corridor including widening the existing highway, supporting construction of SR Loop 303 and arterial streets to divert traffic from Grand Avenue, implementing a multi-jurisdictional transit system in the Northwest Valley, and further detailed study into the possibility of grade separations of Grand Avenue at 103rd Avenue, El Mirage Road, and at Meeker/Reems Road.

In summary, it is anticipated that traffic operations on Grand Avenue would be considerably improved after the completion of additional improvement projects. Current and projected ADT numbers and LOS classifications illustrate that these eight intersections operate at the poorest of traffic operation levels, with substantial delay times exceeding 3 minutes. The recommended intersection improvements would not only improve the LOS at each of the proposed project sites, but would also improve community mobility and access throughout the corridor.

Therefore, it is not anticipated that the proposed project would result in any substantial impacts as a result of any known traffic improvement projects or substantially impact population growth in the western part of the Phoenix Metropolitan Area.

2. Natural Environment

The most notable cumulative impacts with respect to the natural environment of the associated Grand Avenue projects are the results of channelizing drainage and detaining storm water. Storm water would be routed to detention basins or existing storm drain facilities. These facilities would be beneficial because they would aid in the area's drainage and may alleviate some flooding near the various project sites. At a minimum, these drainage improvements would not increase area flooding. The proposed drainage facilities may also provide a link to future area-wide drainage planning being currently evaluated by the Flood Control District of Maricopa County and local jurisdictions. In conclusion, the proposed improvements would not substantially affect the natural environment of the project area.

3. Human Environment

Improvements to several Grand Avenue intersections are planned for future years. These improvements could have a cumulative effect on the business conditions in the Glendale City Center area. However, review of the other improvement projects (both completed and under study) indicated

that there are not substantial negative effects expected during either the construction period or post-construction period, and some positive long-term effects.

Because new development may occur as a result of improved traffic circulation and access through the corridor, the overall social and economic impacts should be positive. However, a number of businesses would be impacted from project-specific right-of-way acquisitions. These businesses would be afforded relocation, but locations are dependent on individual owner site preferences.

Retail establishments would, as a rule, tend to be more sensitive to the kinds of changes that would occur as a result of the various improvements within the Grand Avenue corridor. Of these, many could be classified as "destination" retail establishments, in that they 1) deal with either specialized or high-dollar goods and not with convenience or everyday goods, or 2) they are places with some degree of regional name recognition. The nature of these retail businesses would, therefore, tend to minimize loss of business activity because of relocations or disruptions and changes to business access.

The foreseeable effects that apply to the wholesale and manufacturing businesses are primarily a matter of changes in access. Temporary access restrictions and/or detours could be necessary during construction, although access to businesses and nearby residences would be maintained. Permanent changes to routing of traffic would occur as a result of grade-separation at one leg at each of the respective intersections throughout the Grand Avenue corridor. However, in most cases less than one mile of "out-of-direction travel" would be required. Because of substantial improvements to each respective intersection LOS, travel times along these alternative routes would not be substantially different than what occurs throughout the corridor today.

Several businesses could be affected during construction from typical traffic-related delays and, as a result, driver avoidance. A traffic plan would be implemented to address traffic-related construction issues. Impacts would not be anticipated to be substantial because customers would still be provided access during construction. In addition, even though permanent access changes would occur, creating some out-of-direction travel, these impacts would not be expected to be substantial. Traffic control plans would be established in accordance with Part VI of the current ***Manual on Uniform Traffic Control Devices for Streets and Highways***, published by the U.S. Department of Transportation, FHWA (2000) and ADOT's Traffic Control Supplement (1996).

As a result of anticipated operational improvement and functionality of the Grand Avenue corridor, new development along the corridor may be encouraged. The shifting of roadway alignments would provide new opportunities at sites currently undeveloped. These proposed alignment changes could promote improvements or expansion of existing commercial and retail developments because better traffic operations could encourage additional patronage to the corridor. Therefore, the cumulative impacts of these eight projects may improve or promote the development of nearby vacant land and encourage improvements to existing land uses within the Grand Avenue corridor and may improve the overall community character.

The planned and completed improvements along Grand Avenue, as well as those currently under construction, have altered the ridership and route of the Yellow Line. Currently RPTA and the cities of Phoenix, Glendale, and Peoria are considering elimination of this line. Impacts to Route 24, Route 59, Route 70, and the Glendale Urban Shuttle would occur as a result of full closures along Grand Avenue. The grade-separation structures may permanently disconnect portions of Grand Avenue from other RPTA bus lines. ADOT would coordinate with RPTA to address impacts and/or relocation of any temporarily or permanently impacted bus stops or bus routes during final design.

The visual quality of the existing Grand Avenue corridor is characterized by older commercial and industrial buildings along major urban streets carrying high traffic volumes, which are common throughout this segment of the corridor. Some of these existing developments would be acquired during right-of-way proceedings for the proposed realignment of the various intersections. The overall visual quality may be enhanced by the improvements made to parcels of land where portions of these older commercial and/or industrial buildings are located and by landscaping embankment and detention basins. New developments might be constructed adjacent to these new roadway alignments or additions could be made to existing commercial or industrial facilities. Therefore, the cumulative impacts on the visual quality of the Grand Avenue corridor are anticipated to create a positive change.

V. PUBLIC INVOLVEMENT/PROJECT COORDINATION

A. Agency and Stakeholder Coordination

Coordination letters were sent to the following agencies and stakeholders:

Arizona Department of Public Safety

Burlington Northern Santa Fe Railway

City of Glendale

City of Peoria

City of Phoenix

Cox Communications

Flood Control District of Maricopa County

Glendale Elementary School District

Glendale Union School District

Maricopa Association of Governments

Maricopa County

Maricopa County Department of Transportation

Qwest Communications

Regional Public Transportation Authority

Salt River Project

Southwest Gas Company

An agency coordination meeting was held on July 12, 2000, at the Glendale City Hall, located at 5850 West Glendale Avenue, Glendale, Arizona. The meeting was held in conjunction with the Maryland Avenue Overpass at 55th Avenue and Grand Avenue (US 60) project. The meeting included a brief introduction and overview of the two projects. Issues and/or comments received during this meeting included adherence to MAG's long-range plans, provision of adequate public involvement, and identification of the schedule of Grand Avenue corridor projects.

Coordination letter responses received during the project scoping process included a response from MAG, Cox Communications, and Maricopa County. Both MAG and Cox Communications stated that neither party had comments or concerns at this time. Maricopa County provided contact information for applicable earthmoving permits and abandonment or reconstruction of water or sewer lines within any unincorporated areas (Appendix B).

B. Public Involvement

A Public Involvement Plan was prepared for the 59th Avenue at Grand Avenue and Glendale Avenue Design Concept Study and EA, as well as for the Maryland Avenue Overpass at 55th Avenue and Grand Avenue (US 60) project intersection. This plan depicted the strategy to obtain involvement from the public as well as interested groups and organizations such as the local neighborhood associations. In addition, the plan developed a strategy for notifying the public, including placing meeting advertisements in the newspaper(s), distributing door hangers, preparing applicable materials in Spanish as well as English text, direct mailings, and placement of notification on the City of Glendaleís Web site at its request. The Public Involvement Plan was approved by ADOT and presented to the Glendale City Council.

A project-related Web site was developed that included engineering details, environmental documents, project team member contact information, and a forum for both notification of upcoming public meetings and a place to download comment forms for these public meetings. The site includes information on all eight Grand Avenue projects. For further information on this site, please refer to <www.grandavenuecorridor.com>.

Two public meetings have been held for the 59th Avenue at Grand Avenue and Glendale Avenue Design Concept Study and EA. These public meetings included the presentation of detailed engineering drawings and descriptions and the solicitation of public comments on these proposed configurations to be reviewed by ADOT. Both meetings were held in conjunction with the Maryland Avenue Overpass at 55th Avenue and Grand Avenue (US 60) project. The presentation given by project team members as well as meeting handouts were separated to ensure that questions and/or comments could be distinguished for each set of alternatives at the respective intersections. The meetings were held to present the proposed project alternatives and to obtain public input regarding the social, economic, environmental, and design issues for the project.

The first public meeting was held at the Isaac E. Imes Magnet School Gymnasium on November 2, 2000, from 6:00 p.m. to 8:00 p.m. A total of approximately 120 people attended the meeting. Notice of the public meeting was placed in the ***Arizona Republic*** and the ***Glendale Daily Star*** on October 26, 2000, and again on November 2, 2000. In addition, a notice was placed in the ***Prospector*** on October 27, 2000, and on the ADOT EEG Web site. Door hangers in both English and Spanish were also distributed within a 1-mile radius of the project intersection. Comments noted at the meeting or received after the meeting included concerns about causing a further division of the neighborhoods northeast and southwest of Grand Avenue, suggestions that 59th Avenue be

constructed as the underpass/overpass instead of Grand Avenue, and an observation that using Grand Avenue as the grade-separation structure does not eliminate train conflicts.

The second public meeting was held at the Glendale Civic Center on Thursday, November 1, 2001, from 6:00 p.m. to 8:00 p.m. A total of 28 people signed-in at the meeting. Notice of this public meeting was placed in the ***Arizona Republic*** on October 18, 2001, and again on October 25, 2001, and on the ADOT EEG and Grand Avenue project Web sites. In addition to the newspaper notices, approximately 14,000 door hangers were distributed for this project. These door hangers were prepared in both Spanish and English text. Comments received included: expressed concern about the effect of the project cutting off the west side of Grand Avenue from the rest of Glendale; that the project is a waste of money; and that closing off Myrtle Avenue would make it more difficult for through traffic.

A public hearing will be held to provide the public the opportunity to comment on the Draft EA. A copy of the public hearing notice is included in Appendix D.

VI. CONCLUSION

The environmental impacts of the proposed improvements were evaluated based on both the context of the effects on the project area and the intensity or severity of impacts. Table 13 summarizes the environmental impacts which may occur as a result of the proposed project actions.

Table 13. Results of Environmental Analysis

Environmental Consideration	Result of Alternative Evaluation
Ownership, Jurisdiction, and Land Use	No substantial impact
Socioeconomic Resources	No substantial impact
Title VI/Environmental Justice	No substantial impact
Cultural Resources	No substantial impact
Air Quality Analysis	Beneficial impact
Noise Analysis	No substantial impact
Visual Resources	No substantial impact
Invasive Species	No impact
Water Resources Considerations	No substantial impact
Hazardous Materials	No substantial impact
Utilities	No substantial impact
Material Sources and Waste Materials	No impact
Secondary Impacts	No substantial impact
Cumulative Impacts	No substantial impact

VII. PROJECT PREPARERS AND CONTRIBUTORS

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